HUMAN RIGHTS

THIRUVALLUVAR UNIVERSITY

HUMAN RIGHTS

COMPULSORY PAPER

(For all PG Degree Courses)
(with effect from 2020-2021)

Course Objectives

1.Human Rights are the rights of all Human Beings. They have universal application. Awareness about Human Rights and concern for its protection has become an important issue after the second world war and paved way for world Nations to come together for acceptance of Universal Declaration of Human Rights.

2. The role of UN in protecting and promoting awareness of Human Rights is highly significant. The binding nature of the International Conventions and Covenants are still a dilemma. The persuasive force in case of violation of human rights by International community is an area of concern. In the absence of National legislations enforcement of these rights remain as one farce.

3. To trace the development of regional instruments drafted aiming at protection of Human Rights and its enforceability.

4.The Indian perspective of protection of Human Rights vide its Legislations , the Constitution of India more read by its language, the Fundamental rights, Duties and Directive Principles of the State Policy has been elicited. The response shown by Indian judiciary and the expression of judicial activism is highlighted. The development of Human Rights jurisprudence in India is traced.

5.The Special legislations and the enforcement machineries remain as a watch dog in the due enforcement of Human Rights in India. The duty to protect human right of all individuals more particularly those are vulnerable remains more as a National obligation. The course intents to evaluate the Redressal mechanisms practiced in India.

COURSE CONTENTS

UNIT-1:

Human rights- Concepts & Nature

Human Rights: Meaning, Definition, Nature, Content- Legitimacy of Human Rights- Origin and Development of Human Rights- Theories – Principles of Magna Carta – Modern Movements of Human Rights – The Future of Human Rights.

UNIT-2:

Human Rights – The International Perspective

International human rights – Human Right concepts Prior and after World War II – UNO – Universal Declaration of Human Rights (UDHR) – International Covenant on Civil and Political Rights (ICCPR) – International Covenant on Economic, Social and Cultural Rights (ICESCR)- Optional Protocols- Human Right Declarations – Role of United Nation Commissions – Convention on the Elimination of All forms of Discrimination against women (CEDAW) – United Nations Convention against Torture (UNCAT) - United Nations Convention on the Rights of the Child (CRC or UNCRC) - Conventions on the Protection of the Rights of Migrant Workers and Disabled.

UNIT-3:

Regional Human Rights

European Human Rights System- African Human Rights System – International Human Rights – Enforceability before Domestic Courts.

UNIT-4:

Human Rights in India

The Constitution of India – Fundamental Rights – Right to Life and Liberty – Directive Principles of State Policy – Fundamental Duties – Individual and Group Rights – Other facets of Human Rights – Measures for Protection of Human Rights in India.

UNIT-5:

Human Right Violations and Redressal Mechanism

Human Rights – Infringement of Human Right by State Machinery and by Individual – Remedies for State action and inaction – Constitutional remedies – Public Interest Litigation (PIL) - Protection of Human Rights Act, 1993 – National Human Rights Commission – State Human Rights Commissions – Constitution of Human Right Courts

Text Books

Unit-1

- Human Rights Lalit Parmar, Anmol Publications Pvt. Limited, 1998
- Human Rights In International Relations, David P. Forsythe, Cambridge University Press

Unit-2

- Alston, Philip, And Frederic Megret, Eds. The United Nations And Human Rights: A Critical Appraisal. Second Edition. Oxford University Press, 2014.

- Bassiouni, M. Cherif, And William A. Schabas, Eds. New Challenges For The UN Human Rights Machinery: What Future For The UN Treaty Body System And The Human Rights Council Procedures? Intersentia, 2011.
- Kruckenberg, Lena J. The Unreal World Of Human Rights: An Ethnography Of The UN Committee On The Elimination Of Racial Discrimination. Nomos Publishers, 2012.

Unit-3

- Rebecce Wallace, International Human Rights, Text And Materials 1997
- European Convention On Human Rights: Texts And Documents (Herbert Miehsler & Herbert Petzold Eds., 1982)
- A.H. Robertson & J.G. Merrils, Human Rights In Europe: A Study Of The European Convention On Human Rights, 386-413 (3d Ed. 1993)
- International Human Rights Law And Practice ,Francisco Forrest Martin (1997)
- R.K S Inha, Human Rights Of The World (1997)
- African Commission On Human Rights And Peoples Rights Evelyn A Ankumah, (1996)
- The Constitution of India

Unit-4

- Human Rights Bharatiya Values, Mandagadde Rama Jois, Bharatiya Vidya Bhavan, 2015
- B P Singh Seghal , Human Rights in India 1996

Unit-5

- Paras Diwan and Piyush Diwan Women and Legal Protection
- Philip Alston Children Rights and the Law
- G S Bhargave and R M Pal Human Rights of Dalit Societal Violation 1999
- Geralden Van Bueren International Law and The Rights of the Child 1998
- P C Tirpathi Crime Against Working Women

Reference Items: books, Journal

- Protection Of Human Rights Act, 1993.
- Constitutional Law of India (3 Volumes) by Seervai H.M 2015
- The Human Rights Watch Global Report On Women's Human Rights 2000 Oxford Publication
- RS Sharma Perspectives In Human Rights Development
- Julies Stone Human Law And Human Justice 2000 Universal Publication
- Research Handbook On International Human Rights Law, Edited By Sarah Joseph & Edited By Sarah Joseph, Edward Elgar Publishing Limited USA

Course Out Comes

1. After studying unit-1, the student will be able to know the nature of human rights its origin , the theories, the movements in the march of human rights and the facets of future of human rights.

2. After studying unit-2, the student will be able to know the international dimension of human rights, the role of UN and the global effort in formulating conventions and declarations

3. After studying unit-3, the student will be able to Perceive the regional developments of human rights in Europe , Africa and Asia and the enforceable value of human rights in international arena.

4. After studying unit-4, the student will be able to have knowledge on the human rights perspectives in India, more developed by its constitution and special legislations

5. After studying unit-5, the student will be able to know the redressal mechanism made available in case of human rights violation confined to India.

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ENVIRONMENTAL STUDIES

THIRUVALLUVAR UNIVERSITY

PART-IV

ENVIRONMENTAL STUDIES

SYLLABUS

(For all UG Degree Courses)

(with effect from 2020-2021)

SEMESTER I

UNIT-I: INTRODUCTION TO ENVIRONMENTAL SCIENCES: NATURAL RESOURCES :

Environmental Sciences - Relevance - Significance - Public awareness - Forest resources - Water resources - Mineral resources - Food resources - conflicts over resource sharing - Exploitation - Land use pattern - Environmental impact - fertilizer - Pesticide Problems - case studies.

UNIT-II: ECOSYSTEM, BIODIVERSITY AND ITS CONSERVATION:

Ecosystem - concept - structure and function - producers, consumers and decomposers - Food chain - Food web - Ecological pyramids - Energy flow - Forest, Grassland, desert and aquatic ecosystem.

Biodiversity - Definition - genetic, species and ecosystem diversity - Values and uses of biodiversity - biodiversity at global, national (India) and local levels - Hotspots, threats to biodiversity - conservation of biodiversity - Insitu & Exsitu.

UNIT-III: ENVIRONMENTAL POLLUTION AND MANAGEMENT

Environmental Pollution - Causes - Effects and control measures of Air, Water, Marine, soil, solid waste, Thermal, Nuclear pollution and Disaster Management - Floods, Earth quake, Cyclone and Land slides. Role of individuals in prevention of pollution - pollution case studies.

UNIT-IV: SOCIAL ISSUES - HUMAN POPULATION

Urban issues - Energy - water conservation - Environmental Ethics - Global warming - Resettlement and Rehabilitation issues - Environmental legislations - Environmental production Act. 1986 - Air, Water, Wildlife and forest conservation Act - Population growth and Explosion - Human rights and Value Education - Environmental Health - HIV/AIDS - Role of IT in Environment and Human Health - Women and child welfare - Public awareness - Case studies.

UNIT-V: FIELD WORK

Visit to a local area / local polluted site / local simple ecosystem - Report submission

REFERENCES

1. KUMARASAMY, K., A.ALAGAPPA MOSES AND M.VASANTHY, 2004. ENVIRONMENTAL STUDIES, BHARATHIDSAN UNIVERSITY PUB, 1, TRICHY

2. RAJAMANNAR, 2004, ENVIRONEMNTAL STUDIES, EVR COLLEGE PUB, TRICHY

3. KALAVATHY,S. (ED.) 2004, ENVIRONMENTAL STUDIES, BISHOP HEBER COLLEGE PUB., TRICHY

VALUE EDUCATION

THIRUVALLUVAR UNIVERSITY

PART-IV

VALUE EDUCATION

SYLLABUS
(For all UG Degree Courses)

(with effect from 2020-2021)

SEMESTER II

UNIT-I

Value Education - Definition - relevance to present day - Concept of Human Values - self introspection - Self esteem.

UNIT-II

Family values - Components, structure and responsibilities of family - Neutralization of anger - Adjustability - Threats of family life - Status of women in family and society - Caring for needy and elderly - Time allotment for sharing ideas and concerns.

UNIT-III

Ethical values - Professional ethics - Mass media ethics - Advertising ethics - Influence of ethics on family life - psychology of children and youth - Leadership qualities - Personality development.

UNIT-IV

Social values - Faith, service and secularism - Social sense and commitment - Students and Politics - Social awareness, Consumer awareness, Consumer rights and responsibilities - Redressal mechanisms.

UNIT-V

Effect of international affairs on values of life/ Issue of Globalization - Modern warfare - Terrorism. Environmental issues - mutual respect of different cultures, religions and their beliefs.

Reference Books

1. T. Anchukandam and J. Kuttainimathathil (Ed) Grow Free Live Free, Krisitu Jyoti Publications, Bangalore (1995)
2. Mani Jacob (Ed) Resource Book for Value Education, Institute for Value Education, New Delhi 2002.
3. DBNI, NCERT, SCERT, Dharma Bharti National Institute of Peace and Value Education, Secunderabad, 2002.
4. Daniel and Selvamony - Value Education Today, (Madras Christian College, Tambaram and ALACHE, New Delhi, 1990)
5. S. Ignacimuthu - Values for Life - Better Yourself Books, Mumbai, 1991.
6. M.M.M.Mascaronhas Centre for Research Education Science and Training for Family Life Promotion - Family Life Education, Bangalore, 1993.

WEBSITES AND e-LEARNING SOURCES:

www.rkmissiondhe/.org/education.html/

www.clallam:;org/lifestyle/education.html/

www.sun.com/../edu/progrmws/star.html/

www.infoscouts.com

www.secretofsuccess.com

www.1millionpapers.com

http://militarlyfinance.umuc.edu/education/edu-network.html/

PROFESSIONAL ENGLISH

ENGLISH FOR COMMERCE

& MANAGEMENT

TAMIL NADU STATE COUNCIL FOR HIGHER EDUCATION

(TANSCHE)

PROFESSIONAL ENGLISH FOR COMMERCE & MANAGEMENT

OBJECTIVES:

- To develop the language skills of students by offering adequate practice in professional contexts.
- To enhance the lexical, grammatical and socio-linguistic and communicative competence of first year physical sciences students
- To focus on developing students' knowledge of domain specific registers and the required language skills.
- To develop strategic competence that will help in efficient communication
- To sharpen students' critical thinking skills and make students culturally aware of the target situation.

LEARNING OUTCOMES:

- Recognise their own ability to improve their own competence in using the language
- Use language for speaking with confidence in an intelligible and acceptable manner
- Understand the importance of reading for life
- Read independently unfamiliar texts with comprehension
- Understand the importance of writing in academic life
- Write simple sentences without committing error of spelling or grammar

  (Outcomes based on guidelines in UGC LOCF – Generic Elective)

NB: All four skills are taught based on texts/passages.

UNIT 1: COMMUNICATION

Listening: Listening to audio text and answering questions
- Listening to Instructions
Speaking: Pair work and small group work.

Reading: Comprehension passages –Differentiate between facts and opinion
Writing: Developing a story with pictures**.**
Vocabulary: Register specific - Incorporated into the LSRW tasks

UNIT 2: DESCRIPTION
Listening: Listening to process description.- Drawing a flow chart.
Speaking: Role play (formal context)
Reading: Skimming/Scanning-
          Reading passages on products, equipment and gadgets.
Writing: Process Description –Compare and Contrast
          Paragraph-Sentence Definition and Extended definition-
          Free Writing.
Vocabulary: Register specific -Incorporated into the LSRW tasks.

UNIT 3: NEGOTIATION STRATEGIES

Listening: Listening to interviews of specialists / Inventors in fields
          (Subject specific)
Speaking: Brainstorming. (Mind mapping).
          Small group discussions (Subject- Specific)
Reading: Longer Reading text.
Writing: Essay Writing (250 words)
   Vocabulary: Register specific - Incorporated into the LSRW tasks

UNIT 4: PRESENTATION SKILLS

Listening: Listening to lectures.
Speaking: Short talks.
 Reading: Reading Comprehension passages
Writing: Writing Recommendations
          Interpreting Visuals inputs
Vocabulary: Register specific - Incorporated into the LSRW tasks

UNIT 5: CRITICAL THINKING SKILLS

Listening: Listening comprehension- Listening for information.
Speaking: Making presentations (with PPT- practice).

Reading: Comprehension passages –Note making.
　　　　　Comprehension: Motivational article on Professional Competence,
　　　　　Professional Ethics and Life Skills)
Writing: Problem and Solution essay– Creative writing –Summary writing
Vocabulary: Register specific - Incorporated into the LSRW tasks

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Contents

PREFACE

The textbook on Professional English envisioned under the leadership of the Hon. Chief Minister of Tamilnadu, Thiru. Edappadi K.Palaniswami by the Honorable Minister for Higher Education Thiru. K.P. Anbalagan, and Principal Secretary to Government, Department of Higher Education, Selvi. Apoorva, I.A.S., is a pioneering venture and strategic intervention in higher education in Tamil Nadu. It has been prepared with the unstinted support of Thiru. Vivekanandan, I.A.S. Member Secretary, TANSCHE (Tamil Nadu State Council for Higher Education)

Tamil Nadu has the distinction of having the highest GER (Gross Enrolment Ratio) of 49%, in higher education in the country: this figure attests to the efforts of the government to empower the youth of the state by enhancing access to higher education.

After duly examining the challenges faced by students in learning their subjects and with a vision to equip them to compete in a global scenario, four textbooks, *English for Physical Science, English for Life Sciences, English for Arts and Social Sciences* and *English for Commerce and Management* have been prepared.

As language is an essential tool with regard to the learning process, a textbook which uses subject/discipline based content to leverage language learning is an ideal approach and fulfills the dual objective language proficiency and professional competence.

The book is bound to fulfill its destiny as teachers and students work in tandem: teachers as facilitators and learners as highly motivated stakeholders.

Disclaimer

Some of the passages given for Listening, Speaking, Reading and Writing lend themselves to the teaching of Grammar items. However, testing and evaluation does not include Grammar.

This material is not for publication: it is only for training purposes.

UNIT I – COMMUNICATION
LISTENING

Listening: Listening is the process of receiving and responding to spoken messages. Listening is not just hearing what the other person has conveyed but actually refers to understanding what is being said.

Essential Elements of listening

1. Receiving -   Hearing what is said
2. Understanding - Comprehend what is heard
3. Responding -   Acknowledge the speaker by nodding
4. Remembering - Reproduce the crux of what is heard

PRE TASK: Match the words in Column A with their meanings in Column B

A	B
a. founder	sudden large increase
b. pandemic	someone who starts a business
c. spike	something that makes people believe
d. credibility	feeling of great fear
e. panic	disease that spreads over the whole world

Source Passage: An APP for Learning - Business Interview

*Listen to the passage and do the tas*ks that follows:

Interviewer: Welcome to today's show. We're very happy to have Mrs.Madhu who is the creator and founder of ACE App as our guest today. This app is useful in conducting competitive exams like NEET, JEE, NET, etc., online at home. Thank you for coming Madhu.

Madhu: Thanks for having me.

Interviewer: So tell us about your App. How does it work?

Madhu: Well, at this time of pandemic everything is uncertain. We do not know when we will resume our normal life. We cannot forgo an academic year because of Covid-19 situation. Online classes are in full swing for schools and colleges. What about the competitive exams like NEET, JEE,NET etc., ?

These exams get postponed because of the spike of the virus. Students who aspire IIT or medical college are at the verge of frustration. This ACE comes to the rescue of such students.

Interviewer: Well, Madhu what motivated you to create this app?

Madhu: On seeing the frustration and panic of the students when their competitive exams get postponed, I was inspired to create this. Certainly this will be useful at all times for exam conducting bodies like NTA (National Testing Agency) to conduct exam without much infrastructure and manpower.

Interviewer: What are the features of this app?

Madhu: Student's register number, mobile number, digital signature and photo are inter-linked. Even if one of the above doesn't match the student will not be permitted to write the exam. It is digitally secured.

Interviewer: Madhu, what do you say about its credibility?

Madhu: This app will not permit electronic goods like mobile, calculator etc. around 8 meter distance and so help from the internet is restricted. More over when the app is activated, camera in your mobile will be on till the end of the exam and this prevents human help. This also ensures its credibility.

Interviewer: This sounds really good. Madhu, how did you come up with the idea?

Madhu: Well, I have my personal experience. My son's NEET exam is getting postponed month after month because of pandemic. My son feels it would have been better if he had to take up the exam at home on time. As a mother I also felt it would be better to write the exam without being exposed to the virus. This gives me the determination to come out with the app.

Interviewer: What is your future plan?

Madhu: We have just secured some funding and hope to expand the services to conduct home based online semester examination for Arts and Science colleges.

Interviewer: We wish you the best of luck. Thanks again for coming in. Madhu's app ACE is available for both Apple and Android devices. Next week we will meet for another business interview. Have a great week.

Choose the correct answer and complete the statements given:

1. ACE is_____.
   a. a mobile b. an app   c. an electronic device

2. ACE is used to conduct__.
   a. board exam   b. semester exam c. competitive exam

3. The exams got postponed because of _____
   a. COVID-19 b. strike c. flood

   4. ACE does not permit electronic goods around _____metre.
   a. 6   b. 8   c. 5

5. ACE is available for_____devices.
   a. Apple b. Android c. Apple and Android

Fill up the blanks with suitable words/phrases given in brackets.

(secured, uncertain, exposed, on, expand)

1. We have just secured our funding and hope to__the services.

2. Everything is__at this time of pandemic.

3. It is digitally___.

4. Students can take up the exam without being___to virus.

5. When the app is activated, the camera in your mobile will be_____.

You may be familiar with several apps in the android phone. Discuss with your friend any two apps which are useful for your studies.

1.

2.

INSTRUCTIONS

Giving instructions is a common occurrence. Instruction is used to perform a task and carry out a procedure. Generally it will be a kind of numbered list which suggests a sequence of tasks to be carried out. The step-by-step procedure

enables the listener to perform the task. Firstly, secondly, then, finally are used to narrate the sequence of events. One should take care of the following while giving instructions.

- Simple clear instructions
- Be context specific
- Check the understanding of the listener
- Offer the listener an opportunity to clear his doubts
- Logical sequence

In the business organization listening plays a vital role in maintaining healthy relationship among workers, between employees and management and also between company and customer. Active listening and maintaining eye-contact are essential to reduce conflict and build trust.

Give instructions to the sales representatives to achieve sales target.

➤ Be clear about your mission
➤ Set specific goals by breaking the mission
➤ Check your sales activities
➤ Be persuasive
➤ Fulfill customer need
➤ Increase average sales
➤ Create conducive environment
➤ Ask and listen to the customer and then act

A. You will be listening to a supervisor instructing a fresh recruit on the do's and the don'ts of client servicing. As you listen, tick the instructions the supervisor gives.

➤
➤
➤
➤
➤

B. As a team leader, give instructions to the new recruits about the protocols to be followed in the team.

SPEAKING

SOURCE PASSAGE: IMPORTANCE OF BRANDING IN AUTOMOBILE INDUSTRY

PRETASK: Learning New words and Concepts

authenticity – quality of being genuine or true	credibility – the quality that somebody has, that makes people believe or trust them
Branding – the activity of giving a particular name and image to goods so that people will be attracted to them	hesitant–unwilling, embarrassed
	Logo – a printed design or symbol that a company or an organization uses as its sign
coincide – to take place at the same time	
	strive – try hard to achieve something
concur –to agree	
conformity- behavior or actions that follow the accepted rules of the society	sustainable – to make something continue for some time without being less
consistency- the quality of always having the same standards	

Read the given passage and attempt the tasks.

A promise, a belief system, a truth, and a soul. All of these terms have been used to define a brand. I will describe it as a representation of a company's **values** and **goals** demonstrated through its **mission statement**, interaction with consumers, and overall position in the market. Branding is extremely important in the auto industry. Some

consumers in this industry are completely **brand loyal** to one company. Others will explore a new brand if it has a more competitive product or if it is recommended to them by someone they trust.

WHY IS BRANDING IMPORTANT?

Customers are told what to expect from your company through its brand. Your brand is your company's **connection** to its consumers and other businesses. That is why what a company claims their brand message must match with how the company actually operates every day. Positive thoughts or **experiences** with a brand often lead to brand loyalty which frequently results in an increase in sales. In this increasingly **competitive** auto market, the fight for customers' attention and business is getting more and more competitive. You can stand apart from other companies by maintaining a **stellar brand image**. Customer service, blogging, a solid mission statement, and consistent messages on social media can all be beneficial for your brand. You should continuously **strive** to improve your brand's image.

HOW CAN YOU IMPROVE YOUR BRAND?

Consistency

Consistency is achieved when your company's daily actions concur with your brand's image. For automobile franchises, the biggest aspect of consistency involves **communicating** with their customers at the dealership. When a customer anticipates service similar to what your mission statement and advertisements claim, and they don't receive that level of service, their **expectations** are not met. Because of this, **customer satisfaction** goes down, and a word of mouth marketing may not **work in your favour**. That's why consistency among all workers is important. While a logo, colour scheme, and website layout are not the most vital parts of a brand's image, they must

be consistent with your **company's message** in order for it to be effective. Every time something like an interaction, an ad, or a website layout **doesn't coincide** with a company's brand, that **brand's power** and **credibility** are **weakened**.

Authenticity

Studies show that being **honest** about products and services available is even more important than product utility and social significance. People care about how their products are made and whether companies are willing to be **transparent** about their business practices. It is very difficult to gain customer loyalty and trust without **credibility**. People are **hesitant** to trust any company or any person without knowing their story. **Authenticity** is about knowing your audience and **delivering straightforward messages** to them. Building credibility is one of the most beneficial things a company can do for its brand in today's market.

Company

Consistency does not mean conformity. Conformity is not needed for a company's brand to be powerful; in fact, today's culture thrives on **individuality**. Consistency, however, is needed. Every part of the company should be **aware of the brand** and how their job fits into it. Each employee impacts the brand in a different way. The key is making sure that, even more than knowing the company's mission statement, workers realize that their actions impact the company's brand and how it is perceived by the public. Every part of the company from finance to management needs **to participate in actively representing the brand**.

Pull Marketing

Most industries rely on **push marketing** to sell products. This can be effective with some products, but it's hard to do with vehicles. Pushing someone to buy a car is likely not going to be very effective. I know what you're thinking, then how are we supposed to get new customers? The answer seems

simple: **build up your brand**. Well, I guess it's not that simple. To do that requires time, focus, effort, and therefore, money. The point of pull marketing is to **make consumers come to you**. For this to happen, you have to focus on **building credibility** of the company, **expertise in the field**, and **value for the customer**. Focusing on **strengthening the reputation** of your brand should not be seen as insignificant. It may not lead to new clients right away, but pull marketing is **more sustainable** and **less time consuming** than push marketing.

WHAT IS THE NEXT STEP?

The auto industry is **individualizing** vehicles more and more, but you must ensure that your brand and its message **remain intact**. **Customization** is important because it lets consumers **choose** exactly what they want. You should strive to make the overall experience that people get from any interaction with your company **align** with your brand and its reputation. **Consistency** and **authenticity** throughout your entire company are needed in order for you to pull consumers to your brand.

(Attribution: AutoJini. "AutoJini." 13 June 2017. Importance of Branding in the Automobile Industry . 18 June 2020. <https://www.autojini.com/blog/importance-of-branding-in-the-automobile-industry.html).

Answer the following questions.

1. What is the impact of positive thoughts or experience with a brand?
2. What do the customers anticipate?
3. What is meant by authenticity?
4. What is important to gain customer loyalty and trust?
5. Name the three things which will bring customers to you.

B. Discuss in pairs the difference between Push Marketing and Pull Marketing.

C. Your class has decided to buy a water purifier for your class. Divide the class

into four groups to discuss about the various brands. One from each group has to present the merit of their choice of brand before the class.

D. Can you guess the brand of the car? Do you like this?

Present before your class the reasons for liking this particular brand.

E. Imagine you have Redmi Note 9 Pro mobile and your friend has Redmi Note 9

  promax.

  Debate with your friend about the advantages of your mobile.

F. Think about your brand:

1.What is the logo of your college?

2.What is the logo of Tami Nadu?

3.What is the mission statement of your college?

G. Take a look at these car brands. Tag each brand by writing the name of the

  person whom you think is the best fit to purchase that particular brand.

READING

In the field of business, speaking is a key skill that helps one to express oneself clearly, and thus be successful. Moreover to buy and sell goods, to ask for good quality and be assertive, one should be able to articulate boldly and confidently.

Source Passage1: 'Bee'ing Courageous

PRETASK: Learning New words and Concepts.

hive : a container for housing honeybees	immune: having a high degree of resistance to a disease
irk: something that is a source of irritation	foresee: to see (something, such as a development) beforehand
cower : to draw back or crouch down in fearful submission	passion : intense, driving, or overmastering feeling or conviction
dynamic : marked by usually continuous and productive activity or change	
apiary : a collection of hives or colonies of bees kept for their honey	commitment : an agreement or pledge to do something in the future
imbibe : to receive into the mind and retain	visualise : to see or form a mental image of

Many of us stay away when we spot a giant hive on a tree. The very thought of being there irks us out. But while all of us cower in fright and run,

Josephine Selvaraj chose to adopt these bees and share her life with them. "Like others, I was also quite frightened by their sight. But when I started to move around with them, they became my lovable pets. I fondly call them as 'Angels' and not honeybees anymore."

She started her farm in Kondayambatti near Alanganallur with 3 boxes each constituting of 10,000 bees. She is successfully stepping into her seventh year with three thousand boxes — which is roughly three crores of buzzing honeybees. "My interest in this business took a dynamic turn when I started to realize the actual purpose of the honeybees. It is definitely more than just the money. Most of us are really not aware of the multiple advantages of honey. I take an effort to emphasize on the

honeybees which give us the magical solution— The Honey" says the enthusiastic apiarist.

Josephine specializes in producing more than 25 varieties of honey. "We choose the trees which starts to bloom in their respective seasons and keep the honeybee box on the tree. My angels collect honey from the fresh seasonal flowers and gather honey for us. We do this process on neem, berries and other trees that have medicinal properties." says Josephine proudly.

Apart from maintaining her buzzing friends, she provides free training to interested youngsters who are willing to start a farm of their own. She also provides them with some of her angels to start over. So far, she has trained 300 people and continues to do it every month. "I feel the use of honey is not correctly imbibed in the minds of a common man. Honey is the only substance that combines with the blood as soon as it reaches our taste buds. As they are very effective in upholding our immune system, there are chances that the average life time of the people can be increased these days", shares Josephine.

Passion and commitment are the most important factors for attaining excellence and being apiarist is not an exception. Resting in her cupboards are laurels and awards that have recognized her effort. She signs off saying, "My angels conquer my dreams. I am literally addicted to them in some way. I often visualize that someday in the near future, all the trees in Madurai have honeybee hives".

(Source: https://timesofindia.indiatimes.com/life- Style/spotlight/Beeing-courageous/articleshow/11651409.cms)

Answer the following questions in one or two sentences:

1. What is different about the business idea that Josephine undertook?

2. How does Josephine call her 'Bees'?

3. Apart from growing honey, what does Josephine emphasise in her talks?

4. A business needs to do much more than generating profits. Look at her example and elaborate the statement.

5. What does she visualize? What does this vision embody?

Checking Facts and Opinions:
While reading the passage, you might have noticed that some of the statements are **facts** (which are accurate and proven), whereas some statements are **opinions** (which show the speaker's views or attitudes). Opinions may differ from person to person. It is very important to recognize facts and opinions in academic reading and listening for better understanding of a topic.

Read the following statements and say whether they are facts or opinions. Write F against facts and O against opinions.

a) Most people are frightened by bees and fear them.
b) Apiary can be a profitable business if done with passion
c) It is important to pass on the knowledge one has learnt to others
d) Honey has multiple uses
e) There are different varieties of honey depending on the flower from which the bees extract them.

C: Tell us what you think:

There are several mindsets and attitudes about women in business. Give two mindsets of business women that Josephine has broken. Try to use the following expressions while speaking.

- I think --------------------------------

- I believe……………………………………………………

- It seems to me that_____

- In my opinion _____

- I am convinced that………………………………………..

- I feel absolutely certain that…………………………………..

Source Passage2: How to Lessen your Financial Worries

PRETASK:

Try to answer the following questions.

1. Have you ever thought about starting a business of your own?
2. Do you worry about the capital to start your business?
3. Have you thought about the space you need to start a business?

An attractive business idea, capital, and other resources are essential to start a business; if you have the will power, anything and everything is possible. Here is an interesting episode from Daniel Carnegie's **How to stop Worrying and Start Living.**
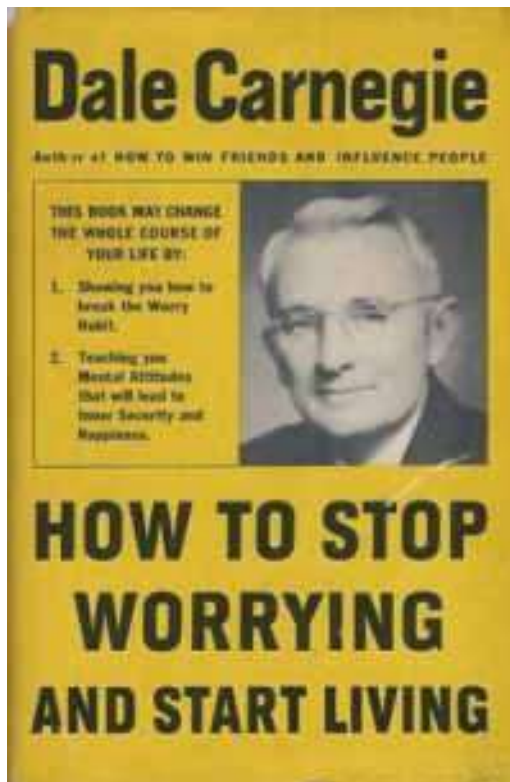
Mrs. Ora Snyder lives in a town of thirty thousand-Maywood, Illinois. Yet she started in business with the kitchen stove and ten cents' worth of ingredients. Her husband fell ill. She had to earn money. But how? No experience. No skill. No capital. Just a housewife. She took the white of an egg and sugar and made some candy on the back of the kitchen stove; then she took her pan of candy and stood near the school and sold it to the children for a penny a piece as they went home. "Bring more pennies tomorrow," she said. "I'll be here every day with my home-made candy." During the first week, she not only made a profit, but had also put a new zest into living. She was making both herself and the children happy. No time now for worry. This quiet little housewife from Maywood, Illinois, was so ambitious that she decided to branch out to have an agent sell her kitchen-made candy in roaring, thundering Chicago. She timidly approached an Italian selling peanuts on the street. He shrugged his shoulders. His customers wanted peanuts, not candy.

She gave him a sample. He liked it, began selling her candy, and made a good profit for Mrs. Snyder on the first day. Four years later, she opened her first store in Chicago. It was only eight feet wide. She made her candy at night and sold it in the daytime. This erstwhile timid housewife, who started her candy factory on her kitchen stove, now has seventeen stores -- fifteen of them in the busy Loop district of Chicago. Mrs. Ora Snyder, in May-wood, Illinois, instead of worrying about finances, did something positive. She started in an extremely small way to make money off the kitchen stove -- no overhead, no rent, no advertising, no salaries. Where there is a will, there is a way.

Find out the apt words from the passage for the given meanings.

A.1.   enjoyment and enthusiasm

A.2.   The money one makes in business

A.3.   Determined to be successful, rich and powerful

A.4.   Person who acts for or managing the affairs of other people in
          business

A.5.   Shy and nervous

A.6.   Former

A.7.   Raise your shoulders and then dropping them to show that you
          don't care

A.8.   Making a continuous loud deep noise

Say whether the following are true or false.

1. Snyder had to earn money since her husband fell ill.

2. Ora Snyder sold candy near the College.

3. Ora did not make any profit in the first week.

4. Ora approached an Indian selling peanuts on the street.

5. Instead of worrying about finances Ora Snyder did something positive.

Answer the following questions.

1. What are the ingredients of Ora Snyder's business?

2. How did Ora make candy?

3. How much does a piece of candy cost?

4. Why did Ora need an agent?

5. How many stores did Ora own in Chicago?

D. Identify the successful business men and women from the picture.

E.Think-Pair-Share - Do you have a business idea? Think about one. Find a partner and share your idea. Listen to their idea and give your opinion.

WRITING

Developing story from Pictures

Pictures are effective tools of communication. Pictures disseminate information to the viewers. Pictures can have silent talk with the onlookers. Pictures will motivate, inspire and lead people. Certainly they will kindle our imagination and **force** us to express our opinion about them. Asking the students to develop a story from the given picture is an opportunity for them to exhibit their imaginative skills with their tremendous vocabulary. The two samples given here will give you an idea of developing a story from **a** picture.

Sample : 1

Mobile Banking

Mobile banking is a boon in this digital world since it allows the customer to conduct transaction remotely using a mobile service like Smartphone, tablet etc., Banks provide impressive apps to carry out transactions at any time. Cheque deposit, transferring money, account balance and Paying for merchandise is quite easy with mobile banking. It can be conducted only from one specific device which has a SIM card whose number is registered with the bank. Mobile app enhances the speed and flexibility. Mobile application itself checks updates. It is available at all 24 hours. Mobile banking is more secure than internet banking.

Sample: 2

ORGANISATIONAL LEADERSHIP

Organizational Leadership plays a vital role in maximizing the efficiency, positively influencing the employees and driving them to achieve the organizational goals. Accomplishment of organizational goals and objectives are possible only with the help of effective organizational leadership. Leadership has to understand the strengths and weaknesses of the organization's workforce and also must motivate them to use their full potential to accomplish the goals of the organization. Leadership shapes the skills and abilities of the individuals to withstand the hard time the firm faces. An ideal leader should not dominate over others; instead he has to direct the individuals to meet the challenges in the process of achieving the objectives of the organization. To lead his team effectively, he should identify the strength of the individuals of his team. This could help him to delegate responsibilities according to their abilities. He should be optimistic and empathetic; he should make them realize the significance of team work. Ethics, communication and vision are the hall marks of effective leadership. Since facing ethical dilemma is quite common in business, he should be honest, responsible and committed. With his extraordinary communication skills he can bridge the management and the workforce of the organization. His efficient conflict management skill would definitely help him to resolve the conflict smoothly. Involving the employees in the decision making process will certainly benefit the business. He should communicate the organization's mission, vision and policies to the members of his team. Knowledge about the abilities of the team and the understanding about the expertise of the individuals of his team would help him take the support from them at the time of crisis and involve them in problem solving situations. His acquaintance with the team members and the constant encouragement will impact their performance which will ensure business success. He must have the vision for future that would guide him to take strategic decisions. He should be a change

maker and with him lays the great responsibility of accomplishment of organizations' goals.

A. Develop a story from the following pictures.

1.

a href="http://www.freepik.com">Designed by Freepik"Designed by Freepik"

2.

3.

4.

5.

Developing stories from the pictures Kindle one's imagination and creativity. and from this born innovative ideas. Such ideas may be the origin of new business plan. Moreover this kind of story writing enhances one's language and vocabulary.

LISTENING

Flow chart:

Flow chart is a powerful business tool. It is a diagrammatical representation of the sequence of steps needed to accomplish a task or perform a process. Each step is represented by a unique diagram shape and the steps are linked by connecting lines and directional arrows. Flow chart communicates the logical flow of process effectively.

Source Passage: Human Resource Processes Listen to the passage and draw a flow chart.

Human Resource (HR) Processes are vital to materialize the objectives of the organization. To derive the best benefits from the employees HR follows several steps in equipping the human resource pool.

HR has to advertise the vacancy in print/electronic medium after analyzing job description of the position required. After careful scrutiny of the applications, appropriate candidates are asked to undergo selection. Then selected candidates are inducted into the organization. At the time of induction process the organization's goal and the expected performance from the persons are explained. Training is given to them and its outcome is evaluated. The performance of the employees is monitored and it is confirmed whether the necessary skill is acquired. Finally, the appraisal of the performance is followed by suitable reward strategies and remuneration.

Hint: Here is a model flowchart. Customize it according to your requirements.
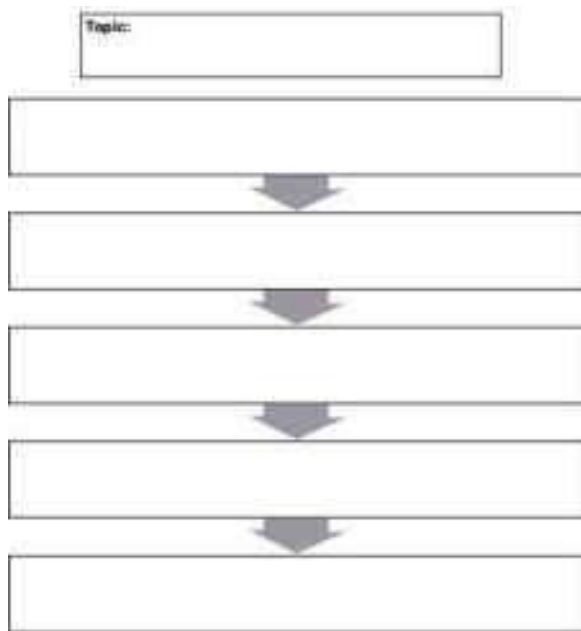
SPEAKING

Pre-task

Fill in the blanks with the appropriate words. (**handsome, pleasant, decided, unaffected, good- looking**)

"Mr. Bingley was_____and gentlemanlike; he had a____countenance, and easy,
_____manners. His sisters were fine women, with an air of
_____fashion. His brother-in-law, Mr. Hurst, merely looked the
gentleman; but his friend Mr. Darcy soon drew the attention of the
room by his fine, tall person,_____features, noble mien,
and the report which was in general circulation within five minutes

after his entrance, of his having ten thousand a year. The gentlemen pronounced him to be a fine figure of a man, the ladies declared he was much handsomer than Mr. Bingley…"
[Attribution: http://www.gutenberg.org/files/1342/1342-h/1342-h.htm]

The above passage has described the features of Mr. Bingley. As a student of Business, you will have to describe products that you either design, manufacture, buy or sell.

Product description: In order to describe a product in a manner that it will sell, you need to:

- Address your target audience directly and personally
- Highlight the benefits of each feature
- Provide detailed, specific and technical descriptions (do not use general words such as "This is an excellent product")
- If your product is really the best you have to establish why it is, by providing more facts
- Appeal to the imagination of the target audience by explaining how they will feel on using the product
- Include stories when selling your product so that the target audience will not notice that they are being sold something
- Use sensory words that appeal to the sense of sight, hearing, smell, taste and touch
- Product reviews should be included to convince the target audience

[Attribution: https://www.shopify.in/blog/8211159-9-simple-ways-to-write-product-descriptions- that-sell#:~:text=A%20product%20description%20is%20the,they're%20compelled%20to%20buy]

Sample: Product Description

KAP7 Size 5 HydroGrip Water Polo Ball (NCAA, CWPA and NFHS Official)

$32.95

Highlight why your product beats the competition. Bonus points for not mentioning them!

What you include in the bullet points depends on your audience. What is the most crucial information they need to know?

A. Imagine you are developing an app that will help to monitor and track the academic progress of students. Give a name for the app. Describe its features to the marketing manager. Perform role play in the class.

B. Imagine you are using WhatsApp to explain the features of a proposed
product which is a mobile. Mention the following details:
- Name of the product
- Target audience
- Specific details of the product
- Compare it with existing product and state why it stands better
- Explain how they will feel while using the product
- Think of a story that can connect the product with the audience
- Use sensory words to describe the product
- Include a product review

Send a WhatsApp message to your friend in the class explaining the above points. Students will take turns in describing the content received from their friend.

Linking words: Linking words help you to connect ideas and sentences when you describe the process.

The table below gives a list of connectives and their functions.

Functions	Connectives
Addition	And, also, besides, furthermore, too, moreover, then, equally important, another
Comparison	Like,, in the same manner, as ... so, similarly
Contrast	But, in contrast, conversely, however, still, nevertheless, yet, on the other hand, on the contrary, or, in spite of this, actually, in fact
Order or sequence	First, second, (etc.), finally, next, then, to begin with, after, before, as soon as, in the end, gradually
Results	As a result, so, accordingly, consequently, thus, since, therefore, for this reason, because of this
Purpose	For this purpose, with this in mind, for this reason
to signal an example or emphasize	For example, to illustrate, for instance, to be specific, such as, especially
to summarize or conclude	In summary, to sum up, to repeat, briefly, in short, finally, on the whole, therefore, as I have said, in conclusion, as you can see

(www.ieltspodcast.com)

READING

There are three different styles of reading academic texts:

Skimming – A quick reading of the text to get a general impression of the author's main argument, themes or ideas.

Scanning –Reading to get specific information from the text.

In-depth Reading – Reading to gain deeper meaning and comprehension of a text.

Skimming: Skimming and scanning are reading techniques that help one to browse through the key words to comprehend the meaning of the content. Skimming refers to quick reading to get the general idea or summary of a text. Skimming focuses in grabbing the main idea of a given text. Non-fluent readers will not be able to determine essential versus nonessential information effectively as they cannot read fast and comprehend. Skimming is a technique which helps one to decide if the text is interesting and if one should go in depth for gaining the required information. Skimming focuses on getting the gist of the content.

Skimming: Digital Transaction

The following are the topic areas of each paragraph. Read the passage and identify the topic of each paragraph and write the number next to it. An example is given for (1)

B. Digital Transaction Defined
C. Benefits of digital transaction
D. Digital India programme
E. Future scope of Digital transactions
F. Digital Payment Method
G. Barriers in Digital transactions

(_____1_____)Digital transactions can be broadly termed as online or automated transactions that take place between people and organizations—without the use of paper. Our nation is making ardent efforts to move towards a cashless transaction economy by minimizing the use of physical cash.

(_____)Digital Wallets are supporting the drive to cashless society in enabling the user to store his card information in the mobile wallets or digital payment apps to make cashless payment in an encoded format to allow secure payments. One can also add money to a mobile wallet and use the same to make payments and purchase goods and services. This eliminates the need to use credit/debit cards or remember the CVV or 4-digit pin.

(_____)The main intent to build a cashless society is that it improves the ease of conducting digital transactions for an individual and reduces the risks and costs of handling cash at the individual level. Moreover, digital payment means payment transactions made through digital modes like internet banking, a most widely used payment method. It increases accountability of transactions and eliminats several risks in business.

(_____)There are still many roadblocks for a smooth switch over to cashless economy in India. Firstly, many people cannot access the rural bank because of the distance. Besides, low literacy rate hinders the accessibility of banking services. Another major problem is non-availability of required technology. A large section of people dread cashless transactions because there is no law against the theft of data security.

(_____)However, in order to bridge the gap, the Reserve Bank of India (RBI) for Payment and Settlement Systems in India released a vision document to provide safe, secure, accessible and affordable e-payment systems. To achieve these, it will focus on four strategic initiatives such as responsive regulation, robust infrastructure, effective supervision and customer-centricity.

(_____)With the phenomenal rise in easy-to-use payment methods like UPI and Aadhaar-linked payments, India has begun its journey towards cashless economy. With the help of infrastructure development in rural India, the possibility of switching over to digital transaction is not a distant dream.

Scanning : Scanning a text means looking through it quickly to find specific information. Scanning is commonly used in everyday life, for example when looking for a definition of a particular scientific term. It requires that readers be able to comprehend words quickly, as they are looking for important information and

not aiming at understanding the nitty-gritty of the idea. Scanning requires you to look for a particular word or phrase. When scanning, the person is looking for a specific piece of information, be it key terms, dates, or times—for example, when you are looking for a travel or a trip you will focus on availability of the trains as per your requirement.

- **Pair Work: The Story of Infosys:** The following sentences are in jumbled order. Arrange the sentences in the right order and make a brief presentation to your partner.

N.R. Narayana Murthy

- Narayana Murthy was not born with a silver spoon in his mouth; in fact, he had to work extremely hard to reach the top.
- The house that Murthy and Sudha bought with a loan became the first Infosys office.
- He strongly felt that he was meant for it and that this was the right time too, he was very passionate about creating good quality software, but the problem was that he didn't have the money.
- Having that sorted, on a morning of January 1981,
  Murthy and his six colleagues started Infosys in 1981
- An excerpt from Sudha Murthy's reminiscences, the wife of Infosys founder N R Narayana Murthy.
- So Sudha gave him Rs. 10,000 which she had saved without his knowledge.
  - Now around the early 70's, he went on to start his first entrepreneurial venture – Softronics, a software consulting firm.
- NR Narayan Murthy is one of India's pioneers when it comes to tech, business, and entrepreneurship.
  - Those days, Murthy wanted to do something with his life, but he had no money.

- After about a year and a half the Softronics sadly tanked and they were forced to shut it down.

Read the text carefully and answer the questions given below.

Over the years, advertising has evolved into a major industry that goes beyond informing to persuading and influencing the consumers. They are psychological tools which influence people to buy a product. Undoubtedly, advertisements and consumer culture have become a part of our lives today causing a significant and measurable effect on consumer cognitions, emotions, and behaviors. Needless to say, advertising has given rise to negative attributes like creating class consciousness, materialism, and other value factors that are not market de facto. We have become trapped in the web of advertising where products like brands of beer and cigarette take over our minds, doing away with our core family values. Unethical advertising can occur in subtle ways that are difficult to establish as complete deception. An effective defense against misleading advertisements has to be built. Not only strict supervisions on media are required, but also necessary education should be provided to develop more critical judgment among media consumers.

In general, an advertisement that uses deceiving information in the form of false claims, inaccurate affiliations or company influence to make their consumers buy their product is called misleading advertisement. These misleading ads can lead to customer disappointment, change of purchase trends of the consumer and also create a false hype, which could lead to trust issues on the product. Unethical advertisements have always been a major issue to the society and its people. In the growing business competition worldwide, marketing and advertisements have become a major weapon in

boosting sales across companies. Besides, millions of rupees are getting spent by companies across nations and worldwide to attract customers to buy their services and products. The increasing grievances reported every day from misguided customers through these fake promotions have now raised a grave concern and have led towards taking appropriate measures against those advertisers. In such instances, the alertness of the consumer is vital in distinguishing false and misleading information that form the content of advertisements.

Answer the following questions:

    B.   What should be the objective of an advertisement?

a) to manipulate consumers
b) to entertain consumers
c) to inform consumers
d) none of the above

    C. What are the impacts of false advertisement on consumers?
a) positive impact

b) negative impact
c) physiological impact
d) none of the above

    D.   In what ways do the advertisers influence our actions ?
a) materialism
b) commercialism
c) professionalism
d) none of the above

    E. What does the phrase "trapped in the web" of advertising mean ?
a) losing the control
b) caught in the situation
c) closed in the web
d) none of the above

    F. Advertisements play an integral role in _
a) improving sales of the product
b) increasing the cost of the product
c) enhancing customer relations
d) none of the above

    G.   What conclusion can you draw based on the passage?

H. Give a suitable title for the above passage.

- **Focus on reading:** Scanning: Read the article on **Assessing yourself and your business idea** and decide which answer best fits the space:

Four basic factors influence a successful business(1)are a qualified entrepreneur, a profitable business idea, a thorough business plan, and adequate capital. Before you proceed, you should assess both your own entrepreneurial skills and the (2)....... of your business concept. If, it is not (3)   for you and your business concept to succeed, you will not need to spend time writing a business plan and seeking financing. Many studies have been conducted and even more articles written on 'the right (4) .... ' for being an entrepreneur. The primary characteristics of successful business owners are Self-confidence, the aspirant believes in own ideas and abilities and (5)......... that belief to others; Risk-taking, the aspirant can (6) ....
status quo, explore options and pursue opportunities; Decision-making, the aspirant has the ability to make(7)   choices even in a stressful environment; Persistence, the aspirant can(8)
.... pursue goals regardless of the energy and commitment required; Goal(9).. the aspirant can envision a desired outcome, as well as plan and implement the activities required to achieve it. Begin improvement by reading business magazines and books enrolling in educational programs and seeking out a (10)   who exhibits the traits you need most.

Choose the answers from the options given below:

3. i. start- in ii. start- of   iii. start- out iv. start- up

4. i. variability ii. versatility   iii. availability   iv. voracity

5. i. feasible ii. vincible iii. ridiculous iv. sensible

6. i. staff   ii. starch   iii. stretch   iv. skills

7. i. carries ii. commutes   iii. confersiv. conveys

8. i. abandon   ii. desert   iii. escape   iv. renounce

9. i. predicated   ii. predicted   iii. prudent   iv. prudish

10.   i. determinedly   ii. tentatively   iii. provisionally
   iv. torturously

11.   i. dominated   ii. guided   iii. inspired   iv. oriented

12.   i. master   ii. mediator   iii. mentor   iv. Moderator

WRITING

Source passage 1: Creating a Marketing Copy

In marketing a sale, the consumer has to be convinced in purchasing a product. This demands the need in developing a marketing copy. Therefore, writing a marketing copy is an important strategy because it elaborates the quality of a product through product description which determines to promote or demote a sale. It should provide the required information that contributes to the making of purchase decision. It has to provoke the customer to fantasize owning the product. Obviously, it signifies their interest in the purchase of the product.

Therefore, exposing the learners to the essential elements of copy writing would give a lead to develop their writing skill. First and foremost, use precise sentences, easy to read (i.e.) brevity which helps in focusing the benefits of the product. Tone of the marketing copy should be unique, based on the medium of communication, such as, social networking sites, other virtual sites and print media. So, the six Wh's approach would help to promote the sale in marketing. For example, what are the advantages of using the product? Who can use it? How to use it? When to use it? Why is it necessary to use? Where can it be used? It is also important to feature the unique characteristics of this product in comparison to other competitors.

A paragraph with a few not so lengthy sentences about the product ought to be written to attract the customer. It must persuade the customer and make them feel the void without the product, thereby, compelling them to purchase. The features of the product can be illustrated in bulleted list with visual story telling. Yet, it has to be constricted by not giving a plethora of details or too much information about the product.

For business enterprises to be profitable they need to churn out products and services that their customers will like. Getting concrete insights into the minds of customers is extremely difficult. But it is possible by leveraging the right processes and focusing on the key data points such as the customer profile. This is done by engaging in a small research maintaining a demographic profile to know the target audience and to create an awareness of the product. It provides a better reach to promote the marketing sale. While writing, it has to be remembered that to stay connected with the consumers, second person pronouns such as "you, your and yours" can be used. This will urge the customers to feel the proximity and personalize the copy which is a promotional strategy. Some other ways of promoting sales include: special offers and graphics or images based on the product. Thus, the product description process gives a lead to promote the product when such factors are incorporated in the marketing copy. A copywriting that covers these essentials tends to become persuasive and saleable.

(Source: Professional English for Commerce and Management, University of Madras, 2020-2021)

Glossary:

array- a group or collection of products, often one that

is large or impressive

authorization- official permission or power to do

something

churn- the situation when customers stop using a particular make of goods or services or change to another

concrete- something specific and definite

Compelling Product Description- features the benefits and other

aspects to promote a sale

consumer- a person who buys goods or services for one's own

use

customer profile- it is a description of a customer, or a set of customers, based on the characteristics that they have in common; to know the customers' interests, skills, and desires.

demote- to move to a lower position

demographic profile- connected with basic features of a population such as description of age, gender and income

discourse- formal communication of ideas either

through speech or writing

enterprise- a company or business

incorporate- to include something as part

of something else

insight- to gain an accurate and deep

understanding

leverage- the ability to influence something; to get as much advantage or profit as possible from something that you have

Marketing Copy – unlike news writing or any other, this copy writing has a specific goal of promoting the sale of a product by its description.

plethora- excess of something or abundant information

on the worth of a product to customers

proximity- closeness or nearness

A. Give a few tips to create a marketing copy of a product.

B. Create marketing copy for the following products.
  1. False jewellery
  2. Men's shoes

C. Compare and contrast the marketing copy of the product with its

  advertisement.

4. The picture given below is a sample to show the product description of a marketing copy.

https://commons.wikimedia.org/wiki/File:Fusion_Stor_Inova_Product_ Brochure_series_cover_b [ack.jpg](ack.jpg)

Write your views on the tone of the marketing copy given above in about 50 words:

D. Attempt a description of any one of the pictures given below. You may choose either the fashionable attire on display or the array of a cosmetic item in about 150-200 words.

https[://www.needpix.com/photo/d](https://www.needpix.com/photo/download/1298947)

[ownload/1298947](https://www.needpix.com/photo/download/1298947)

[https://www.needpix.com/photo/8](https://www.needpix.com/photo/860562)

[60562](https://www.needpix.com/photo/860562)

SOURCE PASSAGE 2: MY HARVEST FARMS

The Hindu, Madurai January 7, 2019

(The Hindu, Madurai January 7, 2019)

There are several ways to create change and it could be through business too, says Archana P. Stalin as she describes her venture myHarvest Farms

"We learnt farming activity from scratch and decided it was time to

enable urbanites grow their own food as well," says Archana P. Stalin, Co

Founder of myHarvest Farms.

This young entrepreneur based out of Chennai says that she hopes to build a strong community of farmers and provide them income throughout the year as well as give city folk a chance to choose and eat chemical-free food.

"Ever since I was young, I wanted to create some level of change. The initial plan was to sit for the Union Public Service Commission (UPSC) examination and then become a Collector so that I can create some grassroot level difference. This notion however changed after I joined college," she said.

A graduate of Geoinformatics from Anna University, Guindy, Ms. Archana says that she began an organisation called 'Buds' along with others from college in 2008 and began the process of working with small communities in various villages.

Soon the organisation branched out to environment-friendly projects. One such was restoring water sources like ponds. Buds have been restored in two ponds till date in Virudhunagar and more have been planned, said the co-founder.

She found herself being drawn towards cultivating her own food through terrace gardening. "My husband was inclined towards the world of business and so we first began myHarvest in 2017. Through this initiative, we established terrace gardens in different parts of Chennai. Soon, we began thinking of expanding the venture," she said.

In August 2018, Ms. Archana and her team started a farm in Tiruvallur where 20 families could choose which vegetables they would like home

grown and delivered each day. The organic farm does not use chemicals. People can also be involved in the process of cultivation through a monthly subscription of ₹3,000, says Ms. Archana. A second farm at Tindivanam where 60 families can subscribe, has also been established. She adds that her husband manages the operations of the company and gets his hands dirty on the field and she does the marketing.

A. Write a paragraph on the following.

1. Archana's organization 'Buds'.

2. myHarvest Farms

B. Compare and contrast myHarvest Farming with conventional farming.

C. Write a paragraph on your innovative plan of environmental-friendly projects.

Vocabulary Enrichment:

Now you have learnt the traits you need to become a successful businessman/ businesswoman. Let us work towards enhancing your vocabulary by working on Definitions and Extended Definitions.

DEFINITIONS

The word 'definition' originates from 'define', which is 'stating exactly what a thing is'. A definition has two distinct elements. First, the term should be identified as an item of a large group or category. Then its distinguishing characteristics are to be specified in such a way that no other object, device, or process should fit into the definition.

Steps to write Definitions:

- Use of Articles: A definition usually begins with an article 'a' or 'an' or 'the'.

- State what it is – whether it is a tool or a device or a machine or a component or an instrument or a concept or an idea or a study.
- Describe the primary use of the thing.
- State the condition of the thing, description of the thing. etc.

Example:

1. Dividend – A part of a company's profits that is paid

to the people who own shares in it.

2. Dead Line – A date on which something must be

completed

3. Memorandum – A record of legal agreement which has not yet been formally

prepared and signed

4. Trade – An act of buying and selling of goods and services

5. Strategy – A plan that is intended to achieve a particular purpose

EXERCISE: Write the definitions for the following words.

1. Invoice   -

2. Mortgage   -

3. Negotiate   -

4. Annuity   **-**

5. Trademark -

Extended Definitions

Defining a **word** can be with a synonym, a brief phrase, or a formal sentence that explains the **term** in its most basic form.

Terms are words, compound words, or multi-word expressions that are given specific meanings in specific contexts —these may deviate from the meanings the same words have in other contexts, and in everyday language.

Steps to write Extended Definitions

Explain the word and its term.
  6. Describe its **Classification, principle, and its operation.**
  7. Discuss its **Cause and Effect attributes,** and its component parts.
  8. **Compare and contrast,** if needed**.**

Example:

Collateral Security – This refers to an asset that a lender accepts as security for a loan; the collateral acts as a form of protection for the lender. That is, if the borrower defaults on his loan payment, the lender can seize the collateral and sell it to adjust his loan.

Exercise : Write extended definitions for the following.

- Liabilities-

- Revenue -

- Cash flow -

- Inventory -

- Supply chain -
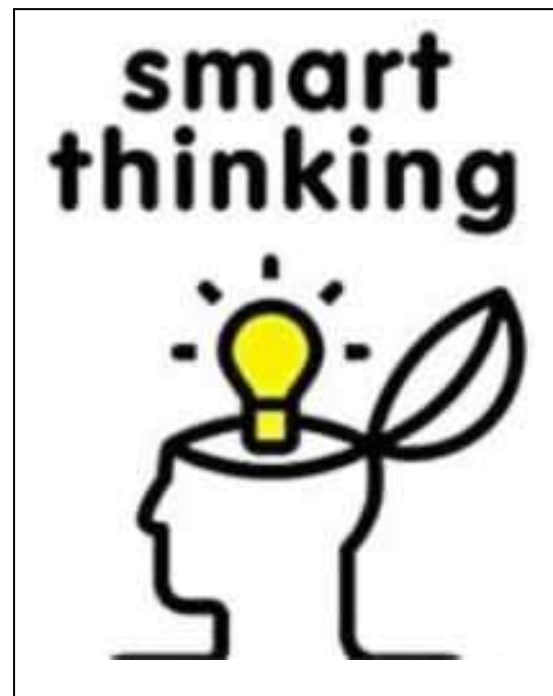
UNIT 3 -
NEGOTIATION
STRATEGIES

LISTENING

Pre-Task

Match the words in column A with their meanings in column B.

A	B
a. Legacy	1 weak, easily hurt physically or emotionally
b. obsession	2. strong, very great
c. summit	3. that has never happened before
d. profound	a situation that exists because of events, actions etc., that took place in the past.
e. transformation	
	5. an official meeting or a series of meetings
f. vulnerable	
	6. complete change
g. equitable	
	7. fair, reasonable
h. unprecedented	
	8. fill one's mind with a particular thought

Digitalization 'A Tool for Development': Interview

Shradha Sharma is a journalist and the founder of
YourStory, the biggest media technology platform for
start-ups in India. Listen to the Interview of Shradha
Sharma with Friederike Bauer and do the tasks.

Shradha Sharma (Photo: Markus Werner)

Are you a digital native?

Shradha: Yes, I am. When I started my platform nine years ago I had no clue, but now I am the biggest champion of the <u>digital world</u>. Why? Because it's a tool for normal people who don't have a lot of money. It doesn't matter what their legacy is or what background they come from. Anyone can go out and create an equitable world with an equal voice. I am the best example of this.

You created the platform YourStory – but what is your personal story?

Shradha: I used to work as a journalist for media organisations, for the CNBC news channel and the Times of India. After a while I realised that the media are very obsessed with success. When you've achieved something, you make it into the news, you make headlines. That started to bother me because it's easy to write about successful people. What about the less celebrated people who have dreams and a sense of purpose, but are only just beginning to fulfil that? I asked myself how I could contribute and help give shape to their ideas.

"Let's celebrate your story"

That's when you started your platform?

Shradha: Exactly, that was in 2008. I called it YourStory because I wanted to tell people: Hey, you have a great purpose, you are doing great things. Let's celebrate your story at the very start. And let's share it with others.

And with it, you wrote your own success story?

Shradha: I had nobody backing me and no background whatsoever in this area, but I did have an idea and a vision. I worked very hard, day and night. Today the company has 90 staff. We've published 72,000 stories of young, small businesses. We reach 15 million people and we're about to expand into other countries, including Germany. We are the voice of start-up entrepreneurs in India. My goal is to make YourStory the biggest platform of its kind in the world.

Marketing for big corporations

Interviewer: That means you make money with it?

Shradha: We've been profitable from the beginning, with a combination of different income sources, one being start-up summits, another doing the marketing for big corporations who want to get in touch with smaller firms.

Interviewer: How do you find the people and their stories?

Shradha: In the beginning we looked for them ourselves, just like any good journalist would. We were searching for the unique angle. Now, we get 400 to 500 mails per day from people who want to get heard. We select the stories and then write them up.

Interviewer: Do you see more chances or more dangers coming from digitalization?

Shradha: A lot more chances. Of course, there's fake news on the internet, and there are issues to resolve, like cyber security and so on. On the other hand, things will evolve; we have to – and we will – find appropriate safeguards. I am very optimistic about that. These are the early symptoms of a profound transformation that has just started.

Interviewer: Would you say the digital world is particularly promising for women and poor people?

Shradha: It will do more good to women and poor people, definitely. In India, of our 1.3 billion people, 800 million have smart phones. They can express themselves, they

can reach out, they can create business opportunities even in remote villages. That is unprecedented. The hurdles to participation are much lower than before – and that's beneficial for vulnerable people.

Interviewer: Some people feel digitalization is widening the gap between countries, others say it will close it. What do you think?

Shradha: I think it will help close it. For instance, with the help of digitalization India has taken huge steps, also economically, so I consider it a tool for development. In the next five years we'll see a much more connected and equitable world.
(Source: Published in akzente 1/18
https://akzente.giz.de/en/artikel/tool-development)

A: Say whether the following sentences are true (T) or false (F).
1. Shradha Sharma is the biggest champion of the digital world.
2. Shradha Sharma is an artist.
3. She created the platform MyStory.
4. They have been profitable from the beginning.
5. Shrada Sharma thinks that digitalization will close the gap between countries.

B. Listen to the passage again and fill up the blanks.
1. I had nobody backing me and no background whatsoever in this area but I did have an___and a____.
2. We reach 50 million people and we're about to expand into other countries, including_____.
3. We are the___of start-up entrepreneur in India.
4. Now we get 400 to 500_____per day from people who want to be heard.
5. The digital world will do more_____to women and poor people.

SPEAKING

Pre-Task:
Work in pairs and put down your ideas on the importance of negotiation skills. Use the starburst pattern to compile your own.

WHO

WHERE   WHEN

Negotiation

Read the passage on Negotiation and complete the following activity.

Negotiation is a fundamental element in the social life of organizations. Whether you are aware

of it or not, you negotiate for resources and attention. In a business to consumer (B2C), negotiation is very different from marketing and selling. The primary difference is that Marketing is about making people aware of the product, services, or business, whereas Selling is to convince the other person to buy your product or service. Negotiation normally

succeeds selling, because once a customer has agreed to buy the product or service, then issues about price, payment terms, delivery, quantity, and others will surface, which are negotiable.

For example, when you see an advertisement in a newspaper for a new television (TV) and go to the store and ask for that particular TV, which is marketing. But when the sales-man explains to you the features and attributes of the TV and how it will be useful to you, that is selling. The moment you show your consent to buy the TV, you start haggling over the price. You may also demand that the payment mode be made in five monthly installments and then you would ask them to deliver the TV within a day or two and discuss the freebies that are available in the store.

Thus, in simple terms, negotiation normally succeeds selling and selling succeeds marketing. It is not possible to jump straight to closure from selling without the negotiation process. There is no way to eliminate the negotiation process. Negotiation is a source of creating more value for the particular transaction and probably creating a bond for a longer term that can help to reach your goals.

(Source : https://blog.spjain.org/thought-leadership/the-art-of-negotiation-negotiation-vs-marketing-vs-selling)

A. Brain storm and write down in the columns the difference between sales, marketing and negotiation techniques?

Sales techniques	Marketing techniques	Negotiation techniques

	60	

Mind Mapping

INEFFECTIVE NEGOTIATIONS

In an overwhelming era, it's easy to forsake preparatory time and hope to wing it in the discussions. Moreover, if not vigilant, a deal could be thwarted by pride and self-importance. Negotiation isn't always easy, it isn't a game to be won or lost. Especially when one finds fear of failure and fear of the unknown assert itself in bargain. Negotiations will also fail if one is too rigid about the deal and unbending on time. Besides, one can't allow emotions to get out of control in bargaining, losing your temper. Remember, deceitful tactics will come back to haunt you, unless one is concerned about upholding integrity.

B. Complete the mind map on subjective factors that affect negotiations using the information provided. Choose four major aspects that must be addressed in order to carry out a successful negotiation. Make sure there is no overlap between these four subtopics and provide at least two important characteristics, details or examples of each subtopic. Also discuss with your neighbor the reasons for your answer.
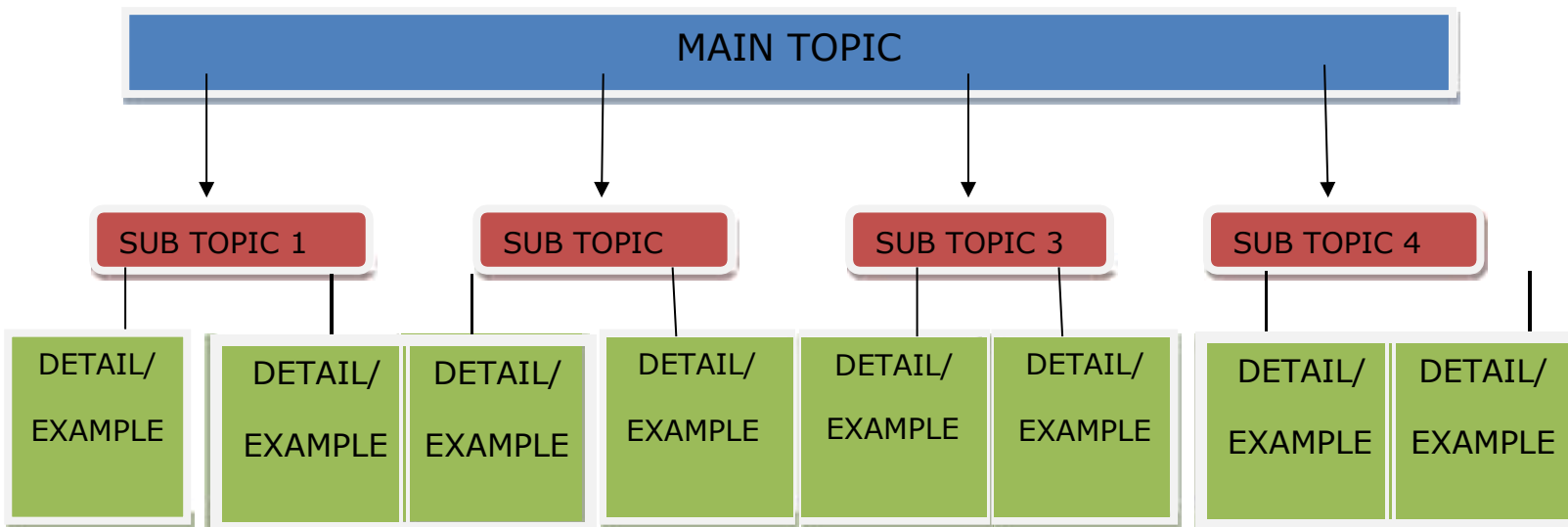
Negotiations: Useful expressions

Opening statements/beginning the negotiation

We would like to welcome you .../ Today we are going to talk about .../ We are glad that you could come and hope you will enjoy your stay here./ Let's get down to business./ Let's begin the discussion with ...

Expressing an opinion

If you ask me .../ I think .../ My opinion, for what it's worth .../ Why not .../ In my opinion .../ Emphasizing a main point/ My main concern at this stage is .../ The main thing for me is ...

The main point I'd like to emphasize .../ I would like to emphasize that .../ One point I'd like to emphasize is that .../ That's/This is an important point. / We need to keep in mind that .../ Let me repeat that ...

Suggesting or accepting an offer/compromise

We'd like to make a proposal that will hopefully benefit both sides./ Would you consider ...?/ Why don't you .../ What

about if we ...?/ I think we can accept that .../ Asking for a suggestion/ How do you think we should deal with ...?/ What do you think is the best way forward?/ What do you propose?

Asking for information

What are your usual charges/fees/rates for ...? /

Can/could you give me some more information about ...?

/ Can you give more specific details about ...? / What can

you tell me about ...?

Rejecting an offer/compromise

I'm afraid that's out of the question. / I afraid we cannot accept that. / I'm afraid that we cannot accept your offer/ because/since/while .../ I'm afraid that those conditions are unacceptable

because .../ Your proposal as it stands is not acceptable.

/ Requests/ Do you think you could ...? Would you be

able to ...? / Could you ...? / Would you be will to ...? /

Being firm

I understand what you're saying, but .../ I can see what you're saying, but .../ By and large, I accept your views, but .../ I'm afraid that's out of the question.

Being flexible

Would you be prepared to ... (if) .../ I'm willing to ... (if) .../ If you agreed to ... we could reciprocate with .../ Provided that you ..., we see no objection to .../ We would be willing to consider that.

We would be ready to make a concession on .../ We have no objection to ...

Clarifying

As I understand it, your offer is .../ If I understand you correctly, .../ Please correct me if I'm wrong, but if I/ understand you correctly, you are proposing .../ As I understand it, you're saying that .../ So what you're saying is ... Am I right?

Agreeing

That's fine. / You're quite right. I hadn't thought about that. / That's a good point. / Okay, I'm happy with that for now. / Yes, I'd go along with that. / Yes, definitely.

Disagreeing

I beg to differ with you./ Nonsense./ By and large, I accept your view, but .../ Yes, I'd go along with that up to a point, but .../ I can't go along with that./ For me that is out of the question./ Yes, but on the other hand ...

Tying concessions to conditions

Provided that you ..., we see no objection to .../ Provided that you ..., I think we could consider ...

I am willing to ... (if) .../ We would be prepared to ... (if) .../ If you agreed to ..., we could reciprocate with/by.../ On the condition that you ..., we could be/ persuaded to consider ...

Next step

I'll be in touch again soon with more details. / Let's talk next week and see how things are going.

Summing up/concluding/closing

The main points that have been made are .../ It's been a pleasure doing business with you.

I think the members of the group are basically in/ agreement with the following points .../ We look forward to getting to know you better/ both socially and

professionally./ I think we've reached an agreement on this issue./ We are looking forward to exploring/ opportunities for a profitable business/ relationship with you./ I think we have met halfway on this./ Let me try to pull the main threads of this/ argument together.

[Attribution: https://ekool.tktk.ee/pluginfile.php/32703/mod_resource/content/0/negotiation_expressions.pdf]

C. **Fill in the blanks with the appropriate expression.**

(Let's talk next week, I'm afraid we cannot accept, By and large I accept your views, Provided that you, Would you consider, We see no objection, What can you tell me about, We would like to welcome you, As I understand your offer is, In my opinion)
……………….. to the first session of our discussion............the proposal to
launch the product online will work out well ....opening a new portal and
creating a new team to supervise this endeavour? Well, ...the new recruits?
They seem to have knowledge of digital marketing ....the fact that we need to
wait till the lockdown is over to launch our product. You feel that the economy will not provide sufficient drive for a product on which millions of dollars has been invested.
………………..
but for what it's worth, this product is one of its kind and the most relevant in the domain of online teaching and learning. I am sure it will hit off more than we expect.
………………..
identify an alternative date to launch, ...in providing incentives for all your
efforts. **………………..** to delay the launch by 6 months .... and see how
things are going.

D. Pierre is going to address the shareholders of his company in a board meeting. They have incurred a loss. Now he

has to request their assistance in prototyping an online venture. How will he convince the shareholders in the board meeting? Write a brief speech where Pierre will try to negotiate this deal with the shareholders. Attempt using the key negotiating terms presented above.

Small Group Discussions

In order to arrive at a decision in a given situation and to find a solution to a problem, one of the most effective methods is conducting a discussion in a group. In addition, group discussions are increasingly being used in the job market during interviews and selection procedures. There are different sub skills that students need to develop in order to be effective participants in a group

discussion. Communication skills, leadership qualities, analytical skills, subject knowledge, attitude are some of the areas that would be tested during a group discussion.

General tips on group discussion

1. **Maintain eye contact while speaking:** Do not look at the evaluators only. Keep eye contact with every group member while speaking.

2. **Initiate the discussion:** Initiating the discussion is a big advantage. But do it only when you understand the topic clearly and have some topic knowledge.

3. **Allow others to speak:** Do not interrupt anyone in between while speaking.

4. **Speak clearly:** Speak politely and clearly. Use simple and understandable words while speaking. Do not be too aggressive if you are disagreeing with someone. Express your views calmly and politely.

5. Make sure to bring the discussion on track. Stick to the topic.

6. **Positive Attitude:** Do not try to dominate

anyone. Keep positive body language and show interest in the discussion.

7. **Speak sensibly:** Your thoughts should be sensible and relevant.

8. **Be a good listener:** Speak less and listen more. Pay attention while others are speaking. This will lead to coherence in the discussion.

E. Look at the info graphic explaining why we should have appropriate body language in negotiations. Discuss in groups about the essential non-verbal communication for the negotiator.

IT'S WHAT YOU DON'T SAY THAT COUNTS!

F.
Read the following article about the art of negotiation. Form groups of eight and have a group discussion on the importance of conducting smart negotiations in business. Choose one person from the group to act as the moderator of the group discussion.

Good negotiation means leaving each party satisfied and willing to do business with each other in future.

In today's competitive market, good negotiation is highly valued. The ability to persuade people is a useful skill both in personal and professional life. When we think of negotiations, we tend to focus on the hard negotiating skills connected with bargaining. In fact, many professional negotiators will confirm that the most important skill is effective relationship building. If there is trust and understanding between the two parties, the negotiation will be much more successful, as will the long-term business relationship between them be.

A win-win negotiation is a careful exploration of both your own position, and that of your opponent, in order to find a mutually acceptable outcome that gives you both as much of what you want as possible. If you both walk away happy with what you've gained from the deal, then that's a win-win!

In an ideal win-win situation, you will find that the other person wants what you are prepared to trade, and that you are prepared to give what he or she wants. If this is not the case, and one of you must give way, then it is fair to negotiate some form of compensation for doing so. But both sides should still feel comfortable with the outcome. Ideally a successful negotiation is where you can make concessions that mean little to you, while giving something to the other party that means a lot to them.

Task: 7

Below is a list of topics that will help you practice and prepare for group discussions. Think about how you would prepare for each topic and exchange ideas with your partner.

1. The relevance of cooperatives in today's global environment

2. Privatisation of public sector

3. Skilled manpower shortage in India
4. Technology creates income disparities

5. Implications of FDI for business

6. Role of MNC's in India

READING

In the field of commerce and management, communication plays an inevitable role. There is a demand to use English language persuasively. Though a major emphasis has been given to speaking and writing in English reading continues to gain power over other communicative skills such as listening, speaking and writing. Despite the fact that they are integrated, reading has to be accentuated because it develops fluency. Eventually, it enhances one's proficiency beginning with the development of vocabulary followed by expressions.

Several centuries have passed, yet the popular English playwright, William Shakespeare remains unsurpassed. Even an illiterate emerging from any nationality would be familiar with the name of this renowned dramatist. Portia and Shylock leave an indelible mark on the minds of the readers, among the unfading characters of Shakespeare.

The Merchant of Venice

Look at the picture given below, it represents the famous characters- Portia and Shylock from Shakespeare's play *The* Merchant *of Venice*.

In fact, it is a remarkable scene where Portia negotiates with Shylock on behalf of the Venetian merchant, Antonio. Shylock, the Jewish money- lender is known for his shrewdness. He makes use of the opportunity to gratify his grudge against the merchant- Antonio, who is hated by Shylock for belittling his business of lending money with interest. Therefore, he lends money to Bassanio on condition that, if the latter fails to return the money within three months, he will take a pound of flesh from the Venetian merchant. Antonio, being a loyal friend of Bassanio, agrees to be the guarantor of the money lent from Shylock at the cost of his life. As he was sure that his ships would return in a month making it easy to return the money before the bond expires.

Unfortunately, Antonio's presumption went wrong, thus leading the friends to trial. Bassanio had to borrow the money from Shylock to woo his Lady, Portia of Belmont. Therefore, Portia feels obliged and comes to their rescue. She is an epitome of intelligence and eloquence which is evident in her assertive speech at the courtroom.

PORTIA

And you must cut this flesh off from his breast:

The law allows it, and the court awards it.

…there is something else.

This bond doth

give thee here no

jot of blood; The

words expressly

are 'a pound of

flesh:'

Take then thy bond,

take thou thy pound

of flesh; But, in the

cutting it, if thou dost

shed

One drop of Christian

blood, thy lands and

goods Are, by the

laws of Venice,

confiscate

Unto the state of Venice. (The

Merchant of Venice, Act IV Scene i)

(Source -

http://shakespeare.mit.edu/mercha

nt/merchant.4.1.html)

Finally, Portia's sharp-witted negotiation restores the situation in favor of Antonio and saves his life.

A. Answer the following questions briefly.

1. Point out four words used in the passage that best describe the ability of Portia.
2. What is the technique adopted by Portia in this scene?
3. How did Portia win the case by quoting the bond?
4. Describe the meaning of the word "negotiation" in your own words.
5. Can you elicit the name of any one English literary piece of work on trade/business which you have come across while reading?

Negotiation Strategies:

https://www.needpix.com/photo/download/390169/personal-group-shaking-hands-silhouettes- man-woman-teamwork-team-finance

According to the Oxford Business English Dictionary, negotiation refers to the "formal discussions between people who are trying to reach an agreement". In business communication, it is a process which establishes the relationship between an employer and the employee, also those associated with each other in trade or business. This process requires a plan to achieve its purpose. There are some strategies for negotiation, it involves:

i. Problem solving: intend to carefully scrutinize the agreement if it happens to be a long-term deal.

ii. Persuading: to convince the negotiating partner and to arrive at a consensus, being aware that the deal is going to be most beneficial to oneself when compared to the other partner.

iii. Conceding: to admit the deal knowing that it would be an advantage for the opposite party to bargain.

iv. Compromising: to arrive at a mutual understanding with both parties experiencing outcomes up to their satisfaction.

v. Avoiding: to delay the process by seeking time to think over the deal in order to get more information or to use a better strategy.

Of course, the negotiation strategy depends on the relationship between the parties, their interests, attitudes and behaviour. In the process, the negotiator ought to be assertive, proactive and with a win-win attitude. While negotiating, the individuals involved should not confront each other nor argue.

De-risking Strategy

Pre-task:
Try to answer the following questions:
1. What is risk management?
2. Do you know the steps of risk management process?
3. Suggest four ways to manage risk.

Read the following passage and do the tasks that follow.

Narayana Murthy at New York University (Stern School of Business)

Dean Cooley, faculty, staff, distinguished

guests, and, most
importantly, the
graduating class of 2007,
it is a great privilege to
speak at your
commencement
ceremonies. I would like
to share with you the
crucibles that tempered
my character
and reshaped my future.

https://commons.wikimedia.org/wiki/File:Nagavara_Ramarao_Narayan a_Murthy.jpg

On a hot summer morning in 1995, a Fortune-10 corporation had sequestered all their Indian software vendors, including Infosys, in different rooms at Taj Residency hotel in Bangalore so that the vendors could not communicate with one another. This customer's propensity for tough negotiations was well-known. Our team was very nervous.

First of all, with revenues of only around $5 million, we were minnows compared to the customer.

Second, this customer contributed fully 25% of our revenues. The loss of this business would potentially devastate our recently-listed company.

Third, the customer's negotiation style was very aggressive. The customer team would go from room to room, get the best terms out of each vendor and then pit one vendor against the other. This went on for several rounds. Our various arguments why a fair price -- one that allowed us to invest in good people, R&D, infrastructure, technology and training -- was actually in their interest failed to cut any ice with the customer. By 5 p.m. on the

last day, we had to make a decision right on the spot whether to accept the customer's terms or to walk out.

All eyes were on me as I mulled over the decision. I closed my eyes, and reflected upon our journey until then. Through many a tough call, we had always thought about the long-term

interests of Infosys. I communicated clearly to the customer team that we could not accept their terms, since it could well lead us to letting them down later. But I promised a smooth, professional transition to a vendor of customer's choice. This was a turning point for Infosys.

Subsequently, we created a Risk Mitigation Council which ensured that we would never again depend too much on any one client, technology, country, application area or key employee. The crisis was a blessing in disguise. Today, Infosys has a sound de-risking strategy that has stabilized its revenues and profits.

(Source :https://www.isical.ac.in/~zahid_t/inspire/murthy.html)

A. **Say whether the following statements are true or false. If true write (T) and write (F) if it is false near the sentence.**

1. A Fortune-10 corporation had sequestered all their Indian software vendors, including Infosys, in a room at Taj Residency hotel in Bangalore.
2. This customer contributed 25% of Infosys revenue.
3. The customer's negotiation style was friendly and encouraging.
4. Infosys accepted the customer's term at the end.
5. Infosys has a sound de-risking strategy that has stabilized its revenues and profits.

B. **Answer the following questions.**

1. What is the occasion on which Narayana Murthy is invited by the Stern School of Business?

2. Who had hosted the meeting at Taj Residency Hotel?

3. How was the negotiation strategized by the host group in Bangalore?

4. What was the major setback of the customer?

5. Comment on the negotiation style of the customer team.

6. What negotiation strategy did Narayana Murthy adopt in handling the customer team?

7. How was the de-risking strategy established?

8. Did Murthy make a right approach or a hasty decision? Justify your answer in a sentence or two.

D. Read the quote and reflect on the idea by discussing in small groups adopting a negotiating style based on a context/ situation of your choice.

"Never do anything because you have to. The only reason to do something is because you want to and because you know it is the right thing for you to do". This is a quote from the best-selling author Robin Sharma's The Monk Who Sold His Ferrari.

Glossary:

a blessing in disguise- something that seems to be a problem at first, but that has good results in the end.

aggressive- angry and behaving in a

threatening way; ready to attack

commencement ceremonies-

graduation day

crucibles- a place or situation in which people or ideas are tested severely, often creating something new or exciting in the process

devastate- to completely destroy a place or an area

fortuitous- happening by chance, especially a

lucky chance that brings a good result gradient-

the degree to which the ground slopes; changes/

increases and decreases minnows- a company or

sports team that is small or unimportant

mull over- to spend time thinking carefully about a plan or proposal

pit- the area of a stock exchange or other exchange

where a particular product is traded propensity- a

natural desire or need that makes you tend to behave

in a particular way revenues- the money that is

received by a business usually from selling goods or

services. sequestered- (of a place) quiet and far away

from people; secluded

vendor- a company or person that sells something; a software vendor

(source: https://www.oxfordlearnersdictionaries.com/)

WRITING

Reading maketh a full man;
conference a ready man; and
writing an exact man.

Pre-Task:

Give an account of your   life
during Covid
19 Lockdown.

Significance of Written Communication in Business

Good written communication will have well defined goals; it would have specified the problems and solutions which are very important for business. Written communication helps to build good relationship when it is done very effectively. It should have clarity for the recipient to understand, to understand the point of view of the writer quickly. The tone of writing should be positive. It is essential that writing should be free from spelling and grammar error. Pre-writing, writing, revising and editing are the important stages in business writing.

You, the digital children would like to answer a question in a word or two. You may find essay writing uninteresting, boring, and time consuming. But essay writing provides you an opportunity to think, gather ideas and logically present your views on a particular topic in an innovative way. It exhibits your logical thinking, critical analysis and immense vocabulary. Essay may be of a simple narrative or description of a process.

Sometimes it may be a compare and contrast or an argument. Essay deals with a single idea with many supporting evidences to drive home the point. Essay can be classified as Narrative, Descriptive, Expository, Argumentative and Compare and Contrast.

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                    ┌─────────┐
                    │  ESSAY  │
                    └─────────┘


    ⬭              ⬭           ⬭          ⬭              ⬭
 NARRATIVE                                            COMPARE
             DESCRIPTIVE              ARGUMENTATIVE       &
                         EXPOSITORY
```
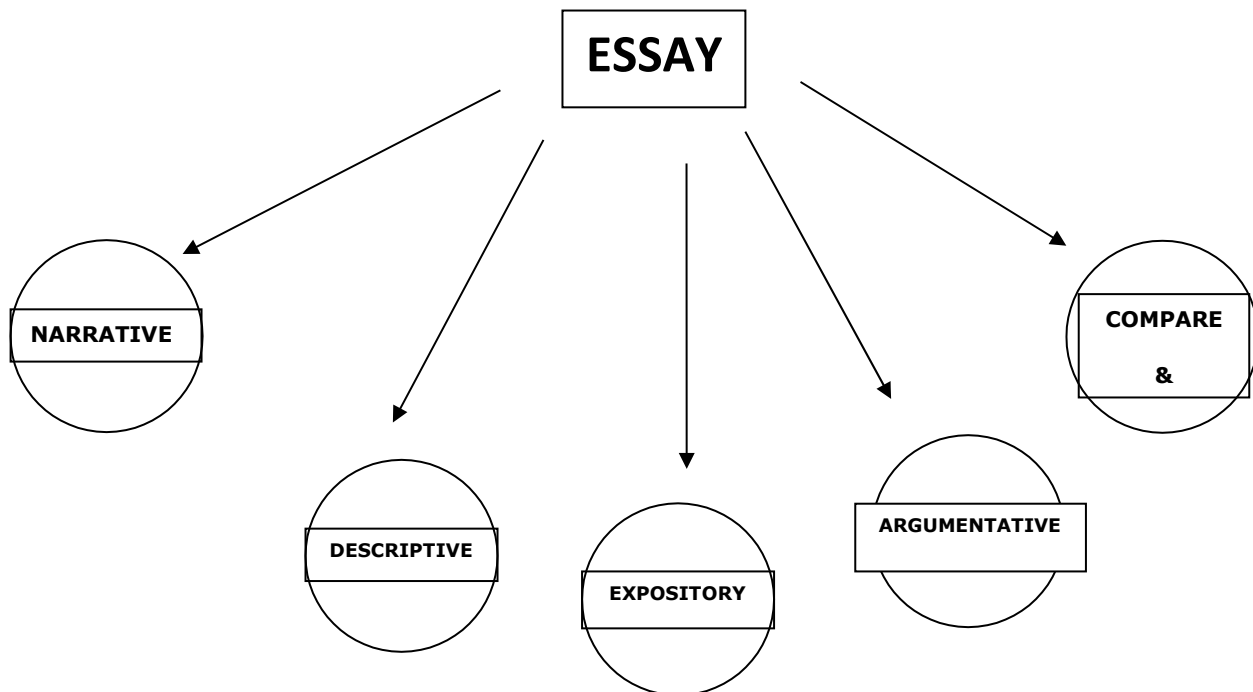
Narrative Essay: It is a simple narration of facts or one's experiences. Writer should be creative. Ex: Your First Day in the College

Descriptive Essay: It is based on the detailed description and analysis of an object or events. Adjectives and adverbs, metaphors and similes can be used to visualize things. Ex: Your favorite Sportsman

Expository Essay: This includes the process of interpreting some process, personal response to the particular experience or situation or critical analysis of some topics. Ex: Public Transport

Argumentative Essay: Writer has to state the thesis statement and then put forth his arguments in such a way to persuade the reader. Ex: Television - boon or bane

Compare and Contrast Essay: Writer has to present the similarities and differences between selected subjects. Ex: As a student you compare your school life with college life.

Structure of the essay:

Essay should have Introduction, body and conclusion.

Introduction: To capture the attention of the reader you can begin the essay with a famous quotation. A good opening would say why your essay is a 'must read'. The main idea should be stated in a single sentence and you should provide background information about the topic. Like

a preview you have to give a snapshot of what your essay is going to be about. Simply it should arouse the interest of the reader.

Body of the essay: This means the supporting paragraphs. Each supporting idea will have a separate paragraph. With facts and examples these ideas can be developed into paragraphs. Transition words or connectives are used to connect these sentences and give cohesion to the paragraph. Transition words are listed below with their use.

- To list different points, transitions like first, second, third etc., are used.
- To add ideas besides, in addition to, furthermore, also etc., used.
- To contrast however, even though, on the other hand, nevertheless etc., are used.
- To show cause and effect therefore, thus, as a result of, consequently etc., are used. (Source: testden.com/toefl/writing-tutorial/parts-of-an-essay.htm)

Conclusion: This summarizes the essay and also stresses the important ideas. Hear you can give your personal opinion and also suggest future course of action.

Points to ponder:

- Plan for the essay- Decide on the points you would like to discuss and also the paragraph divisions.
- Think about your chosen topic. You have to jot down in a piece of paper the several ideas that occur in your mind. Search for illustrations and quotations to support your views.
- Arrange your ideas in a logical order and put them in their respective paragraphs. Ideas should be well organized.
- Always begin your essay with a quotation or an anecdote in order to attract the attention of the readers. Introduction is a kind or preface or preview for the essay.
- Each paragraph should contain a topical sentence and supporting ideas. Examples can be given to stress the points.
- Transitions or connectives could be used to connect the sentences.
- Unity, cohesion and coherence are important ingredients of an essay.
- Simple, direct and clear style is preferred.
- Avoid slang and colloquial expressions.
- Revise your essay after writing, making necessary changes before submission.

SAMPLE I:
DIGITAL CLASS
ROOM

"Education should be for life, not for livelihood" stresses the significance of life lessons for students that are possible only with traditional classroom. Of course, Digital class

room or virtual class room comes to the rescue of students as well as teachers during Covid19 lockdown.

Character building, enhancing life skills and tuning them to face challenges in life are done only in traditional classroom. Apart from delivery of course material and testing the students, preparing them for life is important. Teacher's vital role in the class cannot be replaced by technology.

Technology aids quick learning, provides a support system for students learning methods and makes learning interesting. With ICT tools and internet class room can be an interesting place for the students to equip themselves with subjects, skills and ethics.

In the classroom, students get an opportunity to lean courteous behavior, decency, polite manners along with subjects. They can get their doubts clarified from their teacher immediately. They learn inter-personal skills, leadership quality and team spirit in the classroom. They learn to adjust with the fellow students, share and care for them. It is the teacher who chisels the students and character building takes place gradually at classroom.

Internet, World Wide Web and ICT tools have made learning easy as well as interesting.

Attending Google Meet and submitting the assignment in the Google classroom is easy. One-to- one meeting with teachers and students will teach them life skills. To learn life lessons, it is advisable to have a blended classroom. Mechanical delivery of the material on digital screen will not have an impact on the character of students. Students need teacher's care, emotions, knowledge and direction to grow up. The real classroom blended with digital aids will revolutionize the classroom.

The aim of education is to bring a change in the behavior of the students. So real classroom experience is essential for students. At the same time ICT and digital tools make the class interesting and keep the students

attentive in the class. So blended learning is the need of the hour.

SAMPLE II: E COMMERCE

Electronic Commerce known as E commerce has brought a revolution in business. It means buying and selling of goods and services over electronic system. E business can be carried out with the help of computer, smart phones and internet. E commerce is a strong catalyst for the promotion of business. The ICT in business has brought significant changes in the attitude of the customer as well as in the business strategy.

Modern E commerce uses World Wide Web which has given an option of various technologies like email, smart phone, internet etc., In this busy world, it is easy for man to order A to Z by sitting in front of his computer or mobile phone. This saves his time and energy. The use of ICT has increased production which in turn increases customer's participation in business. With ICT in business silent revolution has happened.

The variety of goods shown on the screen compels him to buy more than what he needs. Certainly, there is a psychological change in the consumer behavior. Naturally consumer buys more than what he actually needs since he couldn't overcome his temptation. In the E commerce his choices are plenty and that gives him satisfaction. It is quite easy for the consumer to buy through electronic transfer of money that is credit or debit card.

Consumer finds E commerce comfortable since he can do business at his own convenience by sitting in his comfort zone. No doubt the use of ICT in business has brought a tremendous change in the business strategy as well as

consumer attitude. In the information age, even the villages are not free from the embrace of E commerce.

Write essays on the following topics in about 250 words.

1. Knowledge Management
2. Business ethics
3. Customer-relation Management
4. Impact of Advertising on sales Performance
5. Impact of Covid19 on our economy

Pre-Task

UNIT 4 - PRESENTATION LISTENING

Match the words in Column A with their meanings in column B.

a	b
1. alternative	a. new idea, way of doing something
2. objective	b. to make an action or process possible
3. facilitate	c. assess
4. dynamic	d. a thing that you can choose to do or have out of two or
5. innovation	more possibilities
6. eventually	e. always changing and making progress
7. evaluate	f. something one driving to achieve
	g. finally
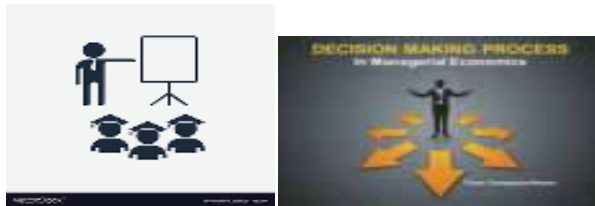
Decision Making and

Management Listen to the following Lecture on

Decision Making and do the tasks.

Attribution
https://www.slideteam.net/media/catalog/product/cache/260x195/d/e/decision_makin
g_process_in_managerial_economics_complete_powerpoint_deck_with_slides_Slide01.jpg

Decision making is an action consciously chosen from available alternatives with a purpose of achieving desired objectives. It is a set of activities that structure the process and facilitates the choice. Decisions are focused on a particular problem or a challenge. Decision making doesn't

mean problem analysis. It is a means to solve problems and is an integral part of the management system of an organization. The following is the sequence of decision-making process.

- ➢ Sense decision requirement
- ➢ Gather information and analyze the cause
- ➢ Identify the alternatives
- ➢ Compare and evaluate
- ➢ Make a choice
- ➢ Implement your choice
- ➢ Review and feedback

All organizations strive hard to achieve their goals and objectives. Taking a proper decision at a proper time will help the organization to achieve its objectives. Analyzing the situation and taking an appropriate decision is important. Right decision will help to manage the business affairs of the enterprise. On the other hand, wrong decision will affect the overall functions of the organization and make it difficult to achieve its goals. Hence decision making is a continuous and dynamic activity in every business. Business requires decisions in various course of actions like production, marketing, sales and various expansion programmes. Efficient decision making in the maximum utilization of resources like men, money, material, methods and information would certainly help the growth of the business. Organization's capability to survive in the competitive market depends upon its decision making. Proper decision making facilitates innovation. Innovation brings new ideas and new products. This eventually will lead to the achievement of business goals and help in business growth.
(Source: https://commercemates.com/importance-of-decision-making/)

A. **Fill up the blanks with suitable words/phrases given in the bracket.**

(innovation, alternatives, goals and objectives, business affairs, decision)

1. Decision making is a process of choosing between ＿.

2. Analyze the situation and take a proper＿＿＿.

3. Taking proper decision at proper time will help achieving organizational

_____.

4. Tight decision helps to manage all____.

5. Proper decision making facilitates____.

B. Say whether the following statements are True or False.

1. Decision making is a choice made from the available alternatives.

2. Problem analysis and decision making are same.

3. Wrong decision will affect the overall function of the organization.

4. Decision making is an integral part of the management system of the organization.

5. Organization's capability to survive in the competitive market depends on planning.

SPEAKING

Pre- Task:

❖ Students may be encouraged to perform this task spontaneously. The teacher should give a topic from the list provided. The learners may be given not more than 5-7 mins for strategizing their ideas. Followed by which, learners who volunteer to perform may be prioritized. If most of the learners are facing inhibitions, a mock task can be performed in the classroom for the peers to gain familiarity and confidence.

❖ **Topics:**

➢ Team work

➢ Win-win strategy

➢ Customer service

➢ Time Management

➢ Future of e-commerce

➢ Work from home is bliss

➢ Outcomes of Demonetization

Presentation signifies the act of informing or persuading a group of audience. It is transmitting knowledge to a set of knowledgeable people in a formal gathering. It can be in a classroom, where a learner presents in front of their peer groups and teachers. It can also be presenting thoughts as an interviewer and sharing information as an interviewee. Later, in a workspace it could be as an employer presenting the ideas amidst one's colleagues and the employer presenting his demands to the recruits. These are the commonly found ways of presentation. Especially, in business communication presentation skill is an essential trait as it is the thread that connects, does the networking and promotes business. Whatever the context of your

presentation might be, the 3P's strategy aids in improving your presentation skill. The 3 P's refer to "Preparation, Practice and Performance".

Benjamin Franklin's aphorism, "By failing to prepare, you are preparing to fail" reinforces the need to prepare oneself before making a presentation. Even a knowledgeable person might lack confidence to exhibit their presentation skills in a formal gathering. To overcome this difficulty, a good preparation is essential. Hence, based on the 3P's strategy here are the points to remember before making a presentation. They are as follows:

P- PREPARE

- ✓ Make sure to know the target audience for whom the presentation is intended.

- ✓ Be clear with the objectives of the presentation.

- ✓ Prepare the framework accordingly, whether it is meant to inform, instruct, promote or persuade.

- ✓ Get the specific details such as purpose, expected outcome, duration and limit, venue, density of the target audience.

- ✓ If necessary, background of a majority of the target group might help to manage unforeseen situations such as the cultural barriers with ease.

- ✓ Thereby, taking these into account you may anticipate the questions which would be a perfect finish to the process of preparation.

- ✓ Last but not the least, plan

your wardrobe. P- PRACTICE

- ✓ Begin the practice with an optimistic mind.
- ✓ Stand in front of the mirror and check your non-verbal cues such as, facial expressions, standing posture, gestures such as moving hands.

- ✓ You may either record your voice or just observe the tone and modulation of your voice while practicing.

P- PERFORM

- ✓ Be animated as your passion for the subject is the driving force.

- ✓ When you enjoy your presentation, it is reflected on your audience too.

- ✓ Stand in a relaxed manner and stay cool by ignoring anxiety.

- ✓ To grab the attention of your audience, you may use inspirational stories, anecdotes, famous maxims or an

interesting case-study.

- ✓ Eye contact is another significant factor to persuade the audience.

- ✓ It is necessary to present the ideas step by step.

- ✓ Remember, the duration of average listening is 20 minutes. A presentation which exceeds more than 30 minutes makes the audience restless.

- ✓ Therefore, plan to express the most important ideas within the first twenty minutes of the schedule which is soon after the initial ice-breaking/ warm-up session.

- ✓ Modulate your voice with rising, falling, rise-fall and fall-rise tone based on the context. This would help gaining control and the attention of the target group. Finally, an innovative way to allow participants' interaction is the straw poll or straw vote using the poll tools such as www.polleverywhere.com, www.socrative.com. It is an unofficial online voting poll which is meant to get the opinion of the audience on a topic or views stated in the presentation. There are some interactive applications which have fun activities, games or quizzes with learning outcome. For instance, www.kahoot.com and www.get.plickers.com.

DRESS UP, STAND UP, SPEAK UP.

Vocabulary Enrichment:

anecdotes- a short amusing or an

interesting true story. aphorism- a

short saying expressing a general

truth.

case study – a detailed account of the development of a person, a group of people or a situation over a period of time, especially for teaching or training.

maxims- a sentence giving a general truth

or rule of conduct.

networking- a system of meeting and

talking to other people

who may be useful or helpful

to you in your work.

strategy- the process of planning something,

to achieve a particular purpose.

A. **Fill in the blanks with suitable words from the box given below to complete the statements elicited in a short talk:**

_____ is a support system of a company in serving its customers to resolve their __. The benefits are:

i.   _____ one's customers

ii.   _____ new customers

iii.   customer _____

iv.   improves the credibility of the _____

v.   strengthens the customer-company_____.

Nowadays, with the advent of e-commerce and_____, this service plays a dynamic role. Thus, it determines the success of a company. Its modern-day counterpart is_____.

B. **With reference to the foregrounding given above, attempt a formal presentation by choosing one of the topics mentioned below:**

persuading	e-marketing	satisfaction	retaining	company
customer service		relationship	superior customer service	
enquiries				

i.   Benefits of Digital Marketing

ii.   Features of online advertisements

iii.   Ethics of marketing

iv.   Characteristics of a good team leader

v.   Face of Digital India

vi.   Mobile apps in e-accounting

vii.   Telemarketing ideas to promote your own product

    viii.   Challenges of cashless economy

    ix.   Retail vs Whole sale

    x.   Online shopping vs Traditional shopping

Soon after selecting the topic, fill in the grid with short sentences which is to display the way you have incorporated the 3 P's. In the last column- "Perform", state the feedback received from the teacher and comments given by the peers.

Preparation	Practice	Performance

C. **Read the following text and work together as teams to interpret the meaning of this context.**

An interviewer of a famous job recruiting company enquires the interviewee. After posing the usual questions,

Interviewer: On a Monday morning while riding on your bike to office, let's suppose you find the roads without much traffic and without the traffic police. But there is a red signal. What will you do?

Interviewee: _____

the recruiter asks,

_____

➢ What will be your response? WRITE your answer in the blank given above.

➢ Followed by a small group discussion find: the hidden meaning behind the question and the symbolic meaning of the responses.

➢ Each team should have a leader to monitor and provide opportunities for all the members to contribute their views towards the discussion. Thereafter, each team should unwrap

an idea/ meaning based on the observations made: EACH ONE GIVE ONE.

READING

Pre-Task: 1

Complete the following cloze exercise. You may refer to the words below.

[duty, death, fallen, linked, power, steady, growing, assurances, cost, cause, ride out, prove, rescue, at any rate, exercised, aiding, searching, adopted, assured, arrangements, will, confidence]

Many are the tales that are told. We are_____that novel methods will be_____, and when we see the originality of **malice**, the **ingenuity** of aggression, which our enemy displays, we may certainly prepare ourselves for every kind of novel **stratagem** and every kind of brutal and **treacherous** manoeuvre. I think that no idea is so **outlandish** that it should not be considered and viewed with a___, but at the same time, I hope, with a_____eye. We must never forget the solid_____of sea power and those which belong to air power if it can be locally_____.

I have, myself, full___that if all do their___, if nothing is neglected, and if the best
_____are made, as they are being made, we shall___ourselves once again able to defend our Island home, to_____the storm of war, and to outlive the **menace** of **tyranny**, if necessary for years, if necessary alone._____, that is what we are going to try to do. That is

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the **resolve** of His Majesty's Government-every man of them. That is the___of Parliament and the nation.

The British Empire and the French Republic,_____

_____together in their___and in their need, will defend to the_____their native soil,___each other like good **comrades** to the utmost of their strength. Even though large tracts of Europe and many old and famous States have

_____or may fall into the grip of the Gestapo and all the **odious** apparatus of Nazi rule, we shall not flag or fail. We shall go on to the end, we shall fight in France, we shall fight on the seas and oceans, we shall fight with_____confidence and growing strength in the air, we shall defend our Island, whatever the_____may be, we shall fight on the beaches, we shall fight on the landing grounds, we shall fight in the fields and in the streets, we shall fight in the hills; we shall never surrender, and even if, which I do not for a moment believe, this Island or a large part of it were subjugated and starving, then our Empire beyond the seas, armed and guarded by the British Fleet, would carry on the struggle, until, in God's good time, the New World, with all its

_____and might, steps forth to the_____and the liberation of the old.

Pre-Task: 2

Guess the meaning of the following words based on the context. These words are in bold and underlined in the passage above.

1. **Malice** :
....
2. **Ingenuity** :
....
3. **Stratagem** :
....
4. **Treacherous** :
....
5. **Outlandish** :
....
6. **Menace** :
....
7. **Tyranny** :
....

8. **Resolve** :

....

9. **Comrades** :

....

10. **Odious** :

....

[Source:https://www.parkwayschools.net/cms/lib/MO01931486/Centricity/Domain/1578/Churchi ll_Beaches_Speech.pdf]

NEVER GIVE UP YOUR DREAMS

III. **Elon Musk**

Image Attribution:
https://commons.wikimedia.org/w/index.php?title=File:Elon_Musk_Royal_Society.jpg&oldid=4 27757367]

1. Take Risks
"When something is important enough, you do it even when the odds are not in your favor." If you have a vision or a dream and there is no well-trodden path to it, take the risk and follow your heart even when you have to go all alone.

2. Always Value Criticism
"A well thought out critique of whatever you're doing is as valuable as gold."
You have to take your product and put it in front of knowledgeable people, and even your friends, to provide you with valuable feedback.

3. Never Give Up
This short excerpt of Elon Musk's conversation with a CBS journalist shows that no matter what happens, he never gives up on his dreams.

Interviewer: When you had that 3rd failure in a row, did you think I need to pack this in? Elon: Never.

Interviewer: Why not?

Elon: I don't ever give up. I mean, I'd have to be dead or completely incapacitated.

Musk failed three times in his attempt to launch successful into space. He spent all of his money into SpaceX, the millions of dollars he had earned from selling PayPal and all his wealth because he trusted his intuition and his vision.

4. Have Burning Passion For Your Work

"If you like what you're doing, you think about it even when you're not working. It's something that your mind is drawn to, and if you don't like it, you just can't make it work."

If you don't like what you do the work will become a form of abuse that you inflict on yourself and you won't be able to push harder in tough times.

5. Work Like Hell

"If other people are putting in 40-hour workweeks and you're putting in 100-hour work weeks,

then even if you're doing the same thing, you know that you will achieve in four months what it takes them a year to achieve."

You really need to outwork your competition in order to come out at the top.

6. Live An Adventure, Don't Just Solve Problems

"I think it [colonizing Mars] would be the most inspiring thing that I can possibly imagine. Life needs to be more than just solving problems every day. You need to wake up and be excited about the future."

You don't have to punish yourself by doing things you hate. Choose to live an adventurous life which makes you wake up feeling excited for what's to come.

7. Signal Over Noise

"A lot of companies get confused. They spend money on things that don't make the product better."

Many people aren't focused. They spend time doing things that don't lead to progress. At Tesla, they never spent any money on advertising and focused all their energy on improving the

A. State whether the following are TRUE or FALSE.

1. Take risks only when the odds are in your favour.
2. You need a well-trodden path to follow your vision or dream.
3. Criticism is as valuable as gold.
4. Knowledgeable people provide useful feedback.
5. Elon did not give up even after his third failure.
6. Elon sold PayPal and all his wealth because he trusted his vision and intuition.
7. You think about what you are doing only when you work.
8. To come out at the top you need to outwork your competition.
9. You need to wake up and solve the problem every day.
10. You must focus all your energy on improving your product.

B. Identify one-word substitutes for the following. Use the following clues:

(Z, PERSEVERA, REPID, USTRIOUS, IMMER, CONFI, DA)

1. Taking risks-_____R E
2. Valuing criticism-_____D E N C E
3. Never giving up-_____NCE Perseverance
4. Burning passion- Z ,
5. Working like hell- Ind ___ __ ___ __ __ ___ __ ___
6. Living an adventure -_____repid
7. Staying focused –_____sed

[Attribution:
https://www.fearlessmotivation.com/2017/08/31/elon-musk-greatest- motivational-speeches/]

C. Complete the following cryptogram using the clues given below.

- A place where government / public records are kept
- A pole or beam used as a temporary support
- A professional soldier hired to serve in a foreign army
- A proficient public speaker
- A remedy for all diseases 2
- A round or cylindrical container used for storing things such as food, chemicals or rolls of film   5
- A school for infants and young children

[1] [2] [3]
[4] [6]

- A sea abounding in islands
- A short journey made by a group of persons together
- A short story based on your personal experience
- A small house with all rooms on one floor

  A small room in a big house, hotel, etc. where glasses, dishes, spoons food, etc. are kept
- A small shop that sells fashionable clothes, cosmetics etc. A speaker's platform

10   11

12 •

13 •

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
19	6	17	15	22										23	13		10								

18   19

A R C _ _ _ E _ _ _ P _ _ _ P _ _ _ _ E R C E _ _ A R _
19 10 17 20 26 25 22   13 10 23 13   11 22 10 17 22 16 19 10 12

O R A _ _ O R _ _ P A _ A C E A _ _ C A _ _ _ _ _ E R
23 10 19 1 23 10   13 19 16 19 17 22 19   17 19 16 26 2 1 22 10

_ _ _ D E R _ A R _ E _ _ _ A R C _ _ P E _ A _ O
3 26 16 15 22 10 14 19 10 1 22 16   19 10 17 20 26 13 22 7 19 14 23

E _ C _ R _ _ O _ _ A _ E C D O _ E _ B _ _ _ _ A _ O
22 8 17 5 10 2 26 23 16   19 16 22 17 15 23 1 22   6 5 16 14 19 7 23

20

24   P A _ _ R _ _ B O _ _ _ _ E _ P O D _ _ _
13 19 16 1 10 12   6 23 5 1 26 4 5 22   13 23 15 26 5 11

P R O P E _ _ _ _ _ E _ _ O R _ A _ _ O _
13 10 23 13 22 16 2 26 1 12   22 8 20 23 10 1 19 1 26 23 16

E R B O _ E _ P E D A _ _ _ C _ _ O _ A _ _ _ A R
25 22 10 6 23 2 22   13 22 15 19 16 1 26 17   1 23 1 19 7 26 1 19 10

_ A _ _ _ _ B R _ _ _ _ E
26 19 16 26 2 11   6 10 26 1 1 7 22

- A special fondness or liking for
- A speech designed to incite action
- A style full of words
- A style in which a writer makes display of his knowledge
- A system of Government in which only one political party is allowed to function.
- A thing likely to be easily broken

Modal

Modal verbs are auxiliary verbs (also called helping verbs). Modal verbs add meaning to the main verb in a sentence by expressing possibility, ability, permission, or obligation. Etc.

A. Fill in the spaces with appropriate modal verbs:

1. Drafting an outline of the presentation _____ help in organizing major points you intend

Modal auxiliaries: can, could, shall, should, would, may, might, must, need to, used to,

to cover. You_____make a plan of each slide that shows the layout in the order you'd like to present them.

2. You_____choose the wording for the title slides carefully so there will be little room for misinterpretation.
   3. Visuals /graphs__made use of for better understanding.
4. If huge graphics is necessary you_use one slide for the graphics and another for the accompanying text.
5. You_____make certain that all information presented on the slides are clearly visible and easy to read without any errors in punctuation, grammar or spelling.
   6. Practice_____ease your nerves, and helps you with an effective presentation.

SOURCE PASSAGE 2: TIME MANAGEMENT

Pre-Task

Get the students to discuss the following questions in the class.

1. What comes to your mind when you hear the word "time"?
2. Have you ever felt that you have enough time to complete all your tasks?
3. Can you think about an instance when you were in stress because you had a lot of work to do?

Read the following passage on time management and attempt the following tasks.

Time is defined as an ongoing sequence of events. It is indefinite and continuous. Likewise, the nature of time is such that it is available in abundance and can never really run out. However, such a statement leads to a genuine question: how many of us have been smart enough to make the most of it? Well, not many. So, what is the major difference between the people who had managed to be at peace with time and those who are constantly at war with it? Time management.

Time management is not a novel concept. We hear about it all the time, don't we? We hear about it when we are unable to complete our homework/task on time; or when we end up submitting our incomplete answer sheets during the examination, despite knowing the answers; or when we are late for our work or appointments; or when we fail to strike a balance between private life and professional life. And we all remember the regrets well, don't we? The regrets caused by the lack of proper time management.

We should listen to the stories of some of the most successful personalities to realize that time is not partial on anyone. Everyone has got the same 24 hours a day. What matters is how one manages to utilize time efficiently and productively. Good time management involves a process, such as, understanding the nature of your task, prioritizing your needs, planning your schedule, and channeling time properly. Time management has always been in trend, however, the importance of it in the present age cannot be overstated. The modern age has given way to a lot of employment opportunities (some of which are highly groundbreaking), but it has also produced plenty of

obstacles. Both the opportunities and hurdles are intricately tied to two of the greatest and indispensable advancement in technology of the day: internet and smartphone. Since there are a lot of ways to spend your time these days, you should consider taking a break and ask yourself some questions. Are you spending your time wisely? Are you gaining something from the way you spend your time? If your answer is yes, are they productive? Is your life progressing? Are you able to switch between your leisure and work easily? Are you able to give your best to the work that you have committed to? How much time do you spend with your family? What have you achieved in your life? Would you call yourself successful? Answering these questions will help you understand your time management skills and will give you an insight into the course of your life.

One can manage time efficiently by adopting certain steps. First and foremost is to ***identify your goals***. Setting goals is very crucial because it acts as a foundation for the task at hand. Start by listing out the works that have to be completed with the given deadlines (if any). This should soon be followed by ***prioritizing the needs*** and tasks. Always start with the most important task with the closest deadline and push back the least important one to the end of the list. Also, remember to discard the trivial and unnecessary works. This will avoid clutter in your brain and will let you complete your work in peace. The third step is to ***give a feasible time limit*** for the tasks by analyzing and measuring the tasks. Prepare a ***schedule*** and stick to it. Finally, remember to ***take a breather*** so as not to feel exhausted.

Life will become more productive when you become smarter and efficient, and time management is one of the best ways to make the best out of life. With good time management, you will be able to enjoy an organized, thriving, and stress-free lifestyle. Those who can time- manage well will also find themselves spending their extra time pursuing their interests.
Moreover, they are also adept at striking a balance between professional and private lives.

Glossary

1. abundance/plenty: in a large number

2. Insight: Deep understanding
3. Genuine: real
4. novel: new
5. Prioritizing: treat something as being important
6. Overstated: emphasized; repeated
7. Groundbreaking: innovative; having new methods or idea
8. Indispensable: something that is very essential
9. Trivial: small; something that is not important
10. clutter: confusion; a collection of untidy and unorganized things
11. Feasible: something that is achievable or possible
12. Breather: Break; interval

A. Answer the following.

1. Why does the author feel that certain people are at a war with time?
2. Describe the process involved in time management.
3. What is the role of time management in the present age?
4. What are the five steps involved in mastering time management?
5. How can you prioritize your tasks?

B. State whether the following is true or false.

1. Time is definite and has an end.
2. The inability to complete your homework on time is an example of poor time management.
3. Achievers are poor at sticking to schedules.
4. You should work until you feel tired.
5. Efficient time management will let you have a balance between work and home.

C. Correct the following jumbled words.

1. Siignth: insight
2. Untrae: nature
3. Tienyftlfcie: efficiently
4. Meti: Time
5. Chesdleu: Schedule

WRITING

Are you familiar with the word 'recommendation'?

Probably yes. You would have heard people say "he got his admission through recommendation", or "it is recommended that you carry an extra pen to your exam hall". What does recommendation mean?

It means endorsement or suggestion, a concept which is a milder form of instruction. However, in a more formal setting, you are likely to come across something known as recommendation writing. In such occasions, you will be asked to briefly sketch a set of guidelines or suggestions on a given context. These guidelines are more suggestive than authoritative. They are basically instructions taking a suggestive tone.

Instructions are mandatory and they are more like giving an order or command. On the other hand, recommendations are more of advice or guidance.

The differences between recommendations and instructions are as follows:

Recommendations

Usually written in passive voice
- Begins with the object in focus
- Does not address the reader directly
- Sentence Patterns are as follows:

Object + should be +

verb (participle) Object +

must be + verb

(participle) Object + can

be + verb (participle)

Object + need to be +

verb (participle) Object +

ought to be + verb

(participle)

Instructions

- Written in active voice
- Begins with an action verb
- Addresses the reader directly
- Sentence patterns
  are as follows:
  Action verb + object

Take a look at the following samples on recommendation writing
I. Recommendations to be followed before using e-wallets/UPI.

- A reputed and trusted application should be selected.
- A special attention can be given on the kind of customer service provided by the application while choosing one, keeping in mind whether it would be possible to get in touch with an executive through a chat or call if a need arises.
- Terms and policies should be read carefully before feeding any sensitive data.
- Unsecure connections such as public Wi-Fi and unsecure sites can be avoided as your device and account could be hacked.
- Mobile notifications and alerts should be opted for as you will be quickly notified of any suspicious transactions.
- Your phone should be periodically checked and cleaned with an anti-virus software.
- The payee's details such as name, phone number, or id, should be double checked before proceeding with the payment.
- Passwords must be protected and confidentiality has to be maintained.

II. Recommendations to be followed by students while making an effective presentation.

- In order to hold the attention of the audience the presentation should be short and relevant.
- It is advisable to prepare and maintain hints while making a presentation.
- In order to boost your confidence while presenting, prepare well and rehearse before a mirror.
- It is advisable not to use the technology that you are unfamiliar with.
- Maintaining eye contact is a must while making presentations.
- A smile can make you appear confident while presenting.
- Focus on your tone while presenting. A rushed and

monotonous presentation is some of the barriers in an effective presentation.
- Humorous and relevant anecdotes can be used to turn the presentation interesting.

A. **Read the following recommendations and the corresponding charts and answer the questions that follow.**

Recommendations to be followed by business persons while collecting customer feedback

- It is recommended that a proper and feasible medium is selected to collect the customer feedback.
- A customer-friendly medium must be chosen to collect the feedback.
- It is advisable not to spend too much money or time in getting the feedback as short and fast surveys lend better response rates.
- It is advisable that the feedback is approached with a positive mind.
- It is recommended that a record is maintained to track the feedback received over time to identify and analyze trends in customer satisfaction.
- Negative comments should be valued and the inputs should be used to improve the product.
- It is advisable that feedback is collected on the improved product.
- It should be remembered that feedback collection is a never-ending process. Go through the flowchart on customer feedback and answer the questions.

Link to the chart

Answer the following:

1. The flowchart depicts a cyclic process. (State whether it is true or false).
2. Sale of the improved product is immediately followed by the customer feedback. (True or false).
3. As a business person, what are you expected to do after receiving negative feedback on your product?
4. The word 'it' has been used thrice in the flowchart. What does it represent?
5. Give a short analysis of the flowchart.

Recommendations to be followed while hiring.

- It is recommended to start by understanding the job and your needs. Job description and expectations can be formulated for a better understanding.
- Necessary steps are to be considered and appropriate mediums are to be chosen while advertising the vacancy.
- It is advisable not to spend too much of your capital on advertisements. On the other hand, free mediums such as word of mouth and internet can be adequately exploited.
- It is highly recommended that an estimated range of the salary intended be specified.
- The applications are ought to be segregated and shortlisted based on the job requirements.
- Before starting with the interview process, it is recommended to prepare some standard and thoughtful questions that will help you understand the candidate's caliber.
- Documents, personal details and references are ought to be verified and double checked before finalizing on the candidate.
- It is recommended not to spend too much time on the hiring

process as there is a risk of losing the desired candidates.

B. **Go through the flowchart on the hiring process and answer the following questions.**

Recruitment process

1. Identify Vacancy
2. Prepare job description and person specification
3. Advertising the vacancy
4. Managing the response
5. Short-listing
6. Arrange interviews
7. Conducting interview and decision making

https://sites.google.com/a/groupzeus.com/home/our-research/recruitment

Answer the following:

1. Pick a word from the flowchart that is synonymous to the word 'hire'.
2. Is it necessary to provide a job profile while advertising the vacancy? (yes/no)
3. A vacancy can arise when an employee resigns. (true/false)
4. Shortlisted candidates are the candidates who had passed the interview. (true/false)
5. What concludes the recruitment process?

C. **Write recommendations on the following topics**

1. Write 8 recommendations to be followed while buying shares.

2. Write 8 recommendations for starting online business of your choice.
3. Write 8 recommendations to be followed to boost up the economy of our country in the post covid-19.

UNIT 5

CRITICAL THINKING SKILLS

LISTENING

Pre-Task: New Words or Concepts introduced / Vocabulary Enhancement

Investor	Financial goals
Incarnation	Initial Public Offering (IPO)
Savvy	Coffee Houses
Unpredictable	Shipping Ports
Economic boom variable	Difficult- to- track
Financial crisis	Building tools
Supply and Demand	Trigger
Reliable Technology	Production
Valuable stock	Fluctuating Price
Prospective Buyers	Stock Value

Preparatory work

- ➢ Discuss basic terms used in stocks and shares
- ➢ Ask whether they know people who buy/sell shares
- ➢ Ask preliminary questions to draw the attention of the students to the idea of investment

E.g.: Do you read news about how a company's shares go up / go down in the stock market?

Source Passage:

How Does the Stock Market Work?

Transcript:

In the 1600s the Dutch East India Company employed hundreds of ships to trade gold, porcelain, spices, and silks around the globe. But running this massive operation wasn't cheap. In order to fund their expensive voyages, the company turned to private citizens– individuals who could invest money to support the trip in exchange for a share of the ship's profits. This practice allowed the company to afford even grander voyages, increasing profits for both themselves and their savvy investors.

Selling these shares in coffee houses and shipping ports across the continent, the Dutch East India Company unknowingly invented the world's first stock market. Since then, companies have been collecting funds from willing investors to support all kinds of businesses. And today, the stock market has schools, careers, and even whole television channels dedicated to understanding it. But the modern stock market is significantly more complicated than its original incarnation. So how do companies and investors use the market today?

Let's imagine a new coffee company that decides to launch on the market. First, the company will advertise itself to big investors. If they think the company is a good idea, they get the first crack at investing, and then sponsor the company's initial public offering, or IPO. This launches the company onto the official public market, where any company or individual who believes the business could be profitable might buy a stock. Buying stocks makes those investors partial owners in the business.

Their investment helps the company to grow, and as it becomes more successful, more buyers may see potential and start buying stocks. As demand for those stocks increases, so does their price, increasing the cost for prospective buyers, and raising the value of the company's stocks people already own. For the company, this increased interest helps fund new initiatives, and also boosts its overall market value by showing how many people are willing to invest in their idea.

However, if for some reason a company starts to seem less profitable the reverse can also happen. If investors think their stock value is going to decline, they'll sell their stocks with the hopes of making a profit before the company loses more

value. As stocks are sold and demand for the stock goes down, the stock price falls, and with it, the company's market value. This can leave investors with big losses– unless the company starts to look profitable again.

This see-saw of supply and demand is influenced by many factors. Companies are under the unavoidable influence of market forces– such as the fluctuating price of materials, changes in production technology, and the shifting costs of labor. Investors may be worried about changes in leadership, bad publicity, or larger factors like new laws and trade policies. And of course, plenty of investors are simply ready to sell valuable stocks and pursue personal interests. All these variables cause day-to-day noise in the market, which can make companies appear more or less successful. And in the stock market, appearing to lose value often leads to losing investors, and in turn, losing actual value.

Human confidence in the market has the power to trigger everything from economic booms to financial crisis. And this difficult-to-track variable is why most professionals promote reliable long term investing over trying to make quick cash. However, experts are constantly building tools in efforts to increase their chances of success in this highly unpredictable system.

But the stock market is not just for the rich and powerful. With the dawn of the Internet, everyday investors can buy stocks in many of the exact same ways a large investor would. And as more people educate themselves about this complex system they too can trade stocks, support the businesses they believe in, and pursue their financial goals. The first step is getting invested.

(Resource   : https://www.ted.com/talks/oliver_elfenbaum_how_ does_the_stock_market_work?la nguage=en#t- 60888)

 A. Listen to the audio and answer the questions given below:

   1. What happens after an IPO is launched?

2. What do you understand by 'appearing to lose' and 'actually losing' of
   share price in the stock market?
3. What causes unpredictability in the stock market?
4. Briefly explain your understanding of the stock market.
5. What is the most important aspect of the stock market?

B. Listen and give specific information on the terms given:
1. Fluctuating price
2. Production Technology
3. Shifting cost of labour
4. Market Forces
5. Share value
6. Human confidence
7. Economic Boom
8. Long term investment
9. Trade stocks
10.Financial goals

C. Match the terms in column A with column B.

A	B
1. Stock market	a. a person or company that invests money (gives or lends it in order to make a profit) in new companies, especially when this involves risk
2.Initial Public Offering	b. a person who invests money in a new business to help it get started
3. Angel investor	c. the mood and level of confidence in a financial market
4. Venture capitalist	d. the first sale of a company's shares to the public
5. Market Sentiment	
	e. the activity of buying and selling shares in particular companies, and the people and organizations involved in this

D. Fill in the blanks with suitable words from the options given in brackets

(dividing, access, exist, internet, shares)

The ------- has made the understanding of the stock market democratic. Now everyone
has -------to knowledge about stocks and --------. The   line between a common investor
and a big investor does not   anymore.

SPEAKING

Making effective PowerPoint presentation
Power point presentations are the most common form of
presentations today. It is operated through slides which have
to be created very carefully. Here is how you start . . .

Step 1   **Step 2**

Create a presentation

From Start menu Choose Microsoft power point

Select the design

From 'design menu' choose the slide that you like. You may customise it by changing the background colours and styles.

Add Slides

From 'Home menu' select 'New slides'

Step 3

Choose the layout

Choose the appropriate layout needed from the 'home menu'

Step 4

To insert . . .

- Click to add text

To insert a table /chart/video/picture, click on the icon that you find in the middle of the slide

To animate – the slides

Select a transition from 'Animation menu'

Step 6

Step7

Step 8

Save the Presentation

Presentation may be saved in the computer by clicking on the 'office button' and selecting 'save as'

To animate the content
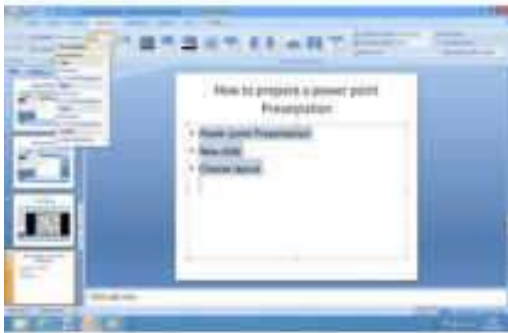
Select the content to be animated. Choose the type of animation from 'animate' under animation menu

Source Passage : Steve Job's Marketing strategy

Read the following excerpts taken from Steve Job's launch of ipod.

The field that we decided to do it in the choice we made was music. Now, Why music? Well, we love music and it's always good to do something you love. More importantly, music is a part of everyone's life; everyone. Music has been around forever and it will always be around. This is not a speculative market and because it's a part of everyone's life it's a very large target market all around the world it knows no boundaries. But interestingly enough, in this world in this whole

new digital music revolution there is no market leader. There are small companies like creative and sonic blue and then there are some large companies like Sony that haven't had a hit yet, they haven't found the recipe. No one has really found the recipes yet for digital music and we think not only can we find a recipe but we think the Apple brand is going to be fantastic because people trust the Apple brand to get their great digital electronics from.

So let's look at portable music, let's look at the landscape. The first thing if you want to listen to music portably, you go out buy CD, CD player right? That's one way to go about 15, 10- 15 songs or you can buy a flash player going by one of those you can buy a mp3 CD player or you can buy a hard disc bass jukebox player. These are the four choices for portable music right now. So, let's take a look at each one of those, a CD player cost about $75 Gold's 10 to15 songs on a CD that's about $5 a song. You go buy a Flash Player pay about double that about $150 holds the same 10 to 15 songs or about $10 a song. You can go buy an mp3 CD player and an mp3 CD which you can burn on your computer cost about $150 but holds 150 songs. You get down to $1.00 a song or if you can go buy a hard drive jukebox player for about 300 dollars it holds about a thousand songs and cost about 30 cents a song. So, we looked at this and studied all these and that's where we want to be that is where we want to be and we are introducing a product today that takes us exactly there and that product is called iPod, iMac, iBook; iPod. What is ipod? iPod is an mp3 music player; has CD quality music and it plays all of the popular open formats of digital music; mp3, mp3 variable bitrate WAV and AIFF. But the biggest thing about ipod is it holds a thousand songs.
Now, this is a quantum leap because it's your for most people it's their entire music library. This is huge, how many times have you gone on the road with a CD player and said oh God!, I didn't bring a CD I want to listen to. You have your whole in music library with you at all times is a quantum leap in listening to music. The coolest thing about iPod is that whole your entire music library fits in your pocket. Okay, you can take the whole music library with you right in your pocket, never before possible, so that's iPod.

(https://www.youtube.com/watch?v=kN0SVBCJqLs)

Slide 1

Marketing Strategy of Steve Jobs
– launch of iPod

Name :
Year & Dept :

Slide 2

Outline

- Introduction
- Analysis of current trends in Music industry
- Comparative Analysis of products
- Market Requirement
- USP (unique selling proposition)
- iPod- value for money
- Conclusion
- Reference

Slide 3

Introduction- Music

- He introduces the topic and the purpose of the product launch
- A brief overview or agenda of his talk.
- Steve Jobs provides the audience with some interesting thoughts on music
- His rhetorical questions- stimulates interest

Slide 4

Analysis of the current trends in Music Industry

- Acknowledges the competitors
- Identifies the marketplace need of a new product
- Apple claims - undisputable market leader of digital products
- Customer steadfastness of Apple's signature products

PANDORA   WALKMAN   VAIO

Slide 5

Slide 6

Comparative Analysis of products

- Highlights the difference between the existing products
- Distinguishes the value for money
- Gradually building his case to the launch of a new product
- Compares iPod and the other music players

Player	Price	Songs	$/Song
CD	$ 75	15	$ 5
Flash	$ 150	15	$ 10
MP3 CD	$ 150	150	$ 1
Hard drive	$ 300	1000	$ 0.30

Market Requirement

- Large song capacity
- Small enough to fit in your pocket
- Long battery life
- An user friendly device
- Quick and simple method to transfer songs

Slide 7

USP (unique selling proposition)

- Steve Jobs supports the customer experience
- Customer focus- provides THE solution
- Sell dreams, not products
- "Entire music library fits in your pocket"
- Emphasizes on the breakthrough of portable music

Slide 8

iPod- value for money

Steve jobs highlights on the money value behind the iPod
- brand
- product
- quality
- service
- customer satisfaction

Slide 9

Conclusion

- The hallmarks of Steve Job's marketing strategies are
- Simplicity
- Narration
- Images of product
- Connecting with people
- Think Different

Slide 10

Reference

- http://www.youtube.com/watch?v=kSnWBCJqLs
- Chivers, Barbera and Michael Shoolbred. A Student's Guide to Presentations: Making your Presentation Count. London: Sage Publications. 2007.
- Negrino, Tom. Creating a Presentation in Powerpoint. California: Peachpit Press, 2005.

Answer the following questions.

1. What are the marketing strategies taken by the Apple company to compete with the digital giants?

2. Analyse Steve Jobs' positive problem-oriented approach in the launch of ipod.

3. How does Steve Jobs interpret the existing problems in the world of digital music in a realistic manner?

4. Do you think he is persuasive in his speech? How does he succeed in convincing the consumers that ipod is unique?

5. Do you agree with Steve Jobs that ipod has revolutionized the concept of ultra-portability?

Work in pairs to discuss the marketing strategy employed by Steve Jobs to engage the audience.A. Look at the following business-related topics. Choose a topic from the list and make a 5 minutes presentation using the ppt in class.

5. Role of Corporate Social Responsibility (CSR) in society
6. Implications of Foreign Direct Investments (FDI) for business
7. Significance of reinventing the customer experience
8. Impact of technology on small and medium enterprises
9. Risks associated with E-commerce business

READING NOTE MAKING

Have you ever wondered how to take notes in class, connect ideas together, and revise for exams in an easy way? Try this important study skill – **NOTE TAKING AND NOTE MAKING.** Do 'Note Taking' and 'Note Making' mean the same? Or, Is there any difference between them?

Note-taking is a process that involves writing or recording what you hear or read in a descriptive way. This is often the first

stage of the process of producing effective notes. **Note- making** is an advanced process that involves reviewing, synthesizing, connecting ideas from a lecture or a reading and presenting the information in a readable, creative way that will stick in your mind.

You listen to a lecture or read a book and take notes. **Taking** notes can be a bit elaborate. **Making** notes is different as they are the resources you create by yourself. They tend to be more concise.

Why is Note Taking / Note Making important? The importance lies in the fact that it -

- Promotes active listening / reading
- Provides a framework for revision
- Improves understanding

Note-taking and note-making are skills and, like all skills, they can be mastered through practice. How you take and make notes will depend on the subject, context and the way you work best. You will need to reflect on your skills as you progress.

The 5 R's of Note Taking / Note Making

Record: During the lecture, write all meaningful information legibly.

Reduce: After the lecture, write a summary of the ideas and facts using key words as cue words.

Recite: Recite all the information in your own words without looking at our notes or the text.

Reflect: Think about your own opinions and ideas. Raise questions and record original ideas

Review: Before reading new material, take 10 minutes to review your older notes. Skim over the main ideas and details.

Pauk, W. (1989), How to Study in College (4th Ed.), Boston, MA: Houghton Mifflin.

What format of Note Taking / Note Making suits you best?This may depend on your learning preference. Are you best visually? Auditorily? Kinaesthetically? A mixture of more than one? Have a think about the easiest way for you to produce and review your notes. The structure of the lecture should help you to organise the content, so it is important to work on that as well. Whatever format you decide on (and it might be different for different lectures) the general principles are the same:

- Use your **own** words.
- Be concise.

- Use abbreviations, phrases and key words, not sentences.
- Date and reference notes clearly.
- Number pages and points.
- Use headings and subheadings.
- List details.
- Use boxes, underlining, colour coding, CAPITALS and highlighting.
- Use arrows to show links between sections.
- Use diagrams and drawings.
- Leave a margin and plenty of space between sections.
- Use a well-spaced layout.

Source Passage 1 : Note Making

Read the passage carefully and make notes from it, keeping in mind the Main ideas and the subordinate points. The first one is worked out for you.

An accountant is a crucial component of any business or organization making financial transactions. Many individuals also employ accountants to oversee their personal finances. Academic preparation for accounting involves training in auditing, financial accounting and taxation. ..... Accountants are responsible for the preparation and maintenance of financial records. They also ensure clients meet government regulatory standards for taxes, reporting, and other legislative compliance. Performing these tasks well allows businesses to operate in a cost- efficient manner that meets governmental tax and compliance rules. Busy companies manage multiple revenue streams and conduct hundreds of thousands of transactions as part of the normal course of business. Accountants create financial statements, handle tax obligations, audit books and systems for legal compliance and cost efficiency, and organize reporting systems. All of these tasks must be communicated to management, and accountants are expected to provide cost-saving solutions for the business at hand.
Source: https://academicearth.org/accounting/

ACCOUNTING – INSIDE OUT

H. ACCOUNTING – FOR EVERYONE
1. Accounting- for organisations
2. Accounting- for individuals
I. ACCOUNTING – COURSE STUDY
1. Developing knowledge in
Aa. Auditing
Ab. Financial Accounting
Ac. Taxation
J. ACCOUNTANT'S JOB DESCRIPTION
1. Preparation and maintenance of financial records
2. Creation of financial statements
C. Fulfilling tax obligations
D. Auditing books – for legal compliance and cost cutting measures
E. Organise reporting systems
F. Ensure clients follow all statutory obligations – with government orders and regulations
G. Keeping the management informed of all work done
K. TWIN GOALS OF AN ACCOUNTANT
1. Compliance with government tax norms
2. Provide cost cutting, cost saving and cost-efficient measures for the business.

A. Make notes of the following passages.

When we are dealing with today's workforce, we should understand that we are dealing with a generation that is in a hurry. Recently, at a conference in Mumbai, a millennial who took the stage, and addressed an imaginary group of Gen-Xers, said, "You are forty; your time is up! It is our time!'" Though uttered tongue-in-cheek, this was highly revealing about the mindset of a generation. Even as they are starting out in their career, this workforce wants to do a great many things from the word 'go', and this usually includes giving back to society, through environment and social impact. They think they already have something to give back to society and the planet. Not only youngsters working in companies that are mandated to have CSR activities, but alsothose in really small start-ups are drawn to causes, and manage to find time for them despite their long working schedules. Such youngsters, which are in the majority, will clearly want a prospective employer to tick

social and environment initiative boxes. If they are in a company that doesn't, they will look for one that does, sooner than later," says Rinku Mecheri, founder of Chennai Volunteers.
Source:https://www.thehindu.com/education/careers/are-employers-ready-for-the-next-future- shock/article30276673.ece

I. Despite the bad rap the financial industry has received in recent years, planning for a career in finance still remains a smart proposition. In fact, issues plaguing the industry today only emphasize the current need for highly educated financial professionals to keep things on track. As a result, choosing to earn a degree in finance could lead to a rather lucrative career upon graduation.

Like marketing, finance is typically considered to be a specialized area of business administration. It is also a field that can be specialized in or studied independently via online finance courses. An academic career in finance will provide you with skills and knowledge to effectively manage money.

Finance specialists are tasked with understanding and forecasting the value of money at a given moment in time. We use this skill in our daily lives when we budget our spending or, say, fund a retirement plan. The profession is also key for businesses and corporations that have far more complex financial needs than the average individual or family.

Source: https://academicearth.org/finance/

Source Passage: Professional Competence, Ethics and Life Skills

Pre-task: Find the right word that matches the descriptions given below.

_____- Removing restrictions on Political and economic systems

_____- Transfer of business from Public to Private ownership and control

_____- Teach idea, attitude or habit by persistent instruction

_____- Something that is helpful or beneficial_____- Something that causes great distress of annoyance

_____- Subject to something (mostly unpleasant) as a result of one's behaviour

_____- duty or commitment; morally and legally bound to a course of action

_____- Put decision, plan, agreement into effect

_____- Firmly fixed, established, difficult to change

_____- Behaviour in keeping with good taste and propriety

_____- Capacity to recover quickly from difficulties

_____- Able to move quickly and easily

_____- Entrust responsibility to another person

Regulated economies work towards the interest of all stakeholders. It levels the playing field so that different kinds of economies thrive. With massive liberalization, privatization and globalization there is a need to review ethics pertaining to small scale industries and budding entrepreneurs. Measures to prevent unhealthy competition and the concentration of power in the hands of a few are an outcome of ethical practices.

According to Wheeler, ethics is the art and science of maintaining harmonious relationship with the society and recognising the moral responsibility for business conduct. Ethics revealed itself in the form of social responsibility programmes such as donations and funding community projects. This countered unethical business practices. Later, the philosophy of ethics laid a solid foundation for a deeper understanding of ethics and elevated accountability and social responsibility.

Ethics should be inculcated not as a separate entity but as a part of human behaviour such that business people are not blind towards the suffering of humanity. When that is not possible the only factor that motivates ethical behaviour is when any unethical behaviour would lead to a huge loss in business. Thus competition compels businesses to conduct their affairs ethically. Any unethical practice

will be a boon in the eyes of the competitors and a bane for a company. In this day and age of social media any faulty product can be blown up thereby incurring a loss for the company. For example Ford motor company headed towards a loss because the safety features were not a part of the cost. One accident that took the lives of all the travellers in such a car without safety features led to a loss of $250 million.

Business' obligation to the society is mandated from the very fact that businesses thrive on a society. The challenge in following business ethics lies in the conflict between maximizing profit and maximizing productivity. Another ethical dilemma is in contexts where there istechnological intervention. Environmental impact on major developmental projects, loss of livelihood, and erosion of cultural values are all an aftermath of unethical business practices.

When it comes to implementing ethics the first action plan is to develop a set of ethics and to make it clearly available in the institutional website. It should be translated to employees at all levels. Secondly a committee that will monitor and address ethical practices should be present. And finally a definite channel of communication of those ethical practices and behaviour that will connect all the members and create self-awareness of their relationship to ethical principles should be developed.

Quality of ethical behaviour cannot be taught. It has to be ingrained at the level of the personality. Conscience, having a selfless attitude, devotion and truthfulness in service, mental peace, politeness, tolerance, transparency, decorum, universal values, commitment, rationality, effective communication, standing with the good, cooperation, satisfaction and following due process are pointers towards ethical behaviour which must be ingrained in the institutional code.

Business is a tricky space and it involves high risk. Resilience -- which is an important life skill -- will go a long way in ensuring perseverant approach towards challenges. Thus professional ethics is followed by life skills that will enable ethical principles to reach its fulfilment. Without life skills it is a challenge to face competition and drive towards success. Effective communication,

confidence, curiosity, critical thinking, innovation, time management and lifelong learning are some added key ingredients to become a successful entrepreneur.

Another important life skill is to be agile. This is to be able to react quickly, make the right decision and to keep adapting to the changing environment. According to Dr Simon Hayward, CEO of leadership development consultancy Cirrus, "Continuous improvement and assimilating new ways of thinking, being and performing, are at the heart of the agile leader's mindset." Without reinventing and realigning goals in the midst of changes an institution will not thrive and therefore would collapse.

Negotiation, problem solving and relationship building goes hand-in-hand in a business environment. These important life skills enable a strong networking with individuals with high potential and ensure that the best is extracted from each other.

Finally, a business person needs to be mindful. The state of being mindful is a state of being completely aware of the surroundings and the individual in the midst of the surrounding. There are various techniques to practice mindfulness. It requires the person to sit or stand in a straight posture and then practice slow controlled breathing. This will be followed by becoming aware of every sensory perception, thoughts, emotions, bodily reactions and will then lead to a state of mindfulness. Being mindful boosts performance by relieving stress, relaxing and by sparking innovation and creativity.When ethics are in place and life skills practised, the icing on the cake is professional competence. Professional competency enables a business person to address professional issues in a professional manner without layering those issues with personal vendetta and agenda. A professional leader not only involves supervising the managers but offering training to the next generation learner. He/she would also recognize conflicts even before it begins and will try to resolve the conflicts rather than to attack the persons involved. To achieve this end a professional has to develop emotional intelligence.

Delegating responsibilities is professionalism at its peak. Instead of randomly allotting work, professional competence

demands that the work be allotted to the person who is skilled in it. Here the business person has to act like a HR in streaming the right talent for the right job.

Becoming a change agent in any context is required of every professional. Change agents are those who take the organization forward without letting it to slip into complacency.

Motivating those working with you is a creative endeavour. Genuine motivation from a professional will ensure that no matter what the situation is they will be the first to get the job done. When the right motivation is given, with the right amount of information then there is nothing that can stop people from performing.

COVID-19 has taught us that there are more things that matter in this world than money, success and power. The preciousness of life and thankfulness of every day should remind us of the importance of the present. It is easy to get carried away by plans for the future or project proposals. What is important in a professional context is the good will and trust of those who we work with. If ethics, life skills and professional competence become a part of our personality and is reflected in our thoughts, words and deeds there is nothing that cannot be achieved as a team. In life we may not have answers for all the questions but as the saying goes "A bird does not want to sing because it knows the answers. It sings because it knows a song". Our seeking should inspire those without a song.

Classify the traits discussed above into Professional skills, Life skills and Ethics.

Ethics	Life skills	Professional Skills

	130	

a) **Read the following case related to the Global brand Starbucks. If you were the CEO of Starbucks what would you do in this situation?**

One year after becoming CEO of Starbucks, Kevin Johnson faced a leadership test when two black men were arrested in a Philadelphia Starbucks. The men were waiting to meet a business associate, but they didn't purchase anything while they were waiting. The store manager asked them to leave, and they refused, explaining that they were there to meet someone. The manager called the police because the men refused to leave, and the police arrested them.

Another patron at Starbucks recorded the arrest on her cell phone, and it quickly went viral. In an interview after the arrest, the woman who took the video mentions that she had been sitting there for a while, and she wasn't asked to leave even though she didn't order anything. Additionally, the video shows the business associate of the black men show up during the arrest, and he asks the manager and the police what the men had done wrong. The general public and those who witnessed the arrest labeled it as discriminatory and racist.

[Attribution: https://www.scu.edu/leadership-ethics/resources/the-ceo-of-starbucks-and-the- practice-of-ethical-leadership/]

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Read the following statements by leaders. Reword or rephrase these statements so that they will express the same meaning in a more humane and compassionate yet assertive manner.

13. "Do what I tell you to do. I'm the boss"

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14. "Don't waste my time; we've already tried that before."

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15. "You can't do whatever you like. This is not your home."

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16. "I'm disappointed in you."

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17. "I've noticed that some of you are consistently arriving late for work. You all need to make sure you do what it takes to be on time every day."

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18. "You don't need to understand why we're doing it this way. You just need to trust that your leadership will always do the right thing."

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19. "You're lucky to have a job."

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20. "I'm excited to announce XYZ and I've worked hard, long hours to get this prepared for viewing."

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21. "Nice job today."

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22. "Permission? Didn't you just take leave?"/"Why do you need permission again?"

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....

[Attribution: https://www.insperity.com/blog/10-things-great-leaders-never-say/]

WRITING

Pre-task

Mention the names of a few world famous entrepreneurs.

10 Inspiring CEOs That are Changing the World through Business
By Grant Trahant

Neil Blumenthal – Warby Parker

Warby Parker provides higher-quality, better-looking prescription eye wear at a fraction of the price and has partnered with non-profits like VisionSpring to ensure that for every pair of glasses sold, a pair is distributed to someone in need.

Ned Breslin – Water For People

Ned has been working on safe water projects since 1987 trying to find a more sustainable approach and create more accountability of water and sanitation programs.

Barbara Bush – Global Health Corps

Barbara Bush is CEO and co-founder of Global Health Corps, an organization that has deployed 322 fellows from 24 citizenships to work in 7 countries, since 2009 focusing on the importance of nutrition in ARV treatment.

Rachael Chong – Catchafire

Rachael Chong is the Founder and CEO of Catchafire, a platform that connects professionals with nonprofits on projects that create positive social impact. Catchafire has become the world's largest online skills-based volunteer marketplace.

Pat Christen – HopeLab

Pat is the CEO of HopeLab, that applies insight from scientific and human-centered research to design consumer products that improve lives by creating tech-based solutions to support human health and well-being.

Jessica Matthews – Uncharted Play

Jessica is the Co-Founder & CEO of Uncharted Play, which is a for-profit social enterprise dedicated to improving lives through play. Their flagship product is the SOCCKET, an energy harnessing soccer ball.

Michael Elliot – ONE

Michael is the President and Chief Executive Officer of ONE. ONE is a global campaigning and advocacy organization of more than 3 million people taking action to end extreme poverty and preventable disease, particularly in Africa.

Jeremy Heimans – Purpose

Purpose, a home for building 21st century movements and ventures, has launched several major new organizations including All Out, a 1.7 million-strong LGBT rights group and built the world's first open-source global activism platform.

Magatte Wade – Tiossan

Magatte Wade is the founder and CEO of Tiossan, a high-end natural skin care company based on indigenous Senegalese recipes.

Jensine (Yen-See Nah) Larsen – World Pulse

By networking through World Pulse's website grassroots women leaders are finding job opportunities, starting new programs and businesses, launching women's cybercafés, and finding international speaking opportunities that are changing their lives and lifting their communities.

[Attribution: https://www.causeartist.com/20-inspiring-ceos-changing-world/]

A. Match the following organizations with the problem solved. Refer to the passage above.

A	B

B. Water For People	a. natural skin care
C. Warby Parker	b. nutrition
D. ONE-	c. grassroots women leaders
E. Catchafire-	d. water and sanitation programs
F. World Pulse-	e. 21st century movements and venture
G. Tiossan	f. soccer
H. HopeLab	g. prescription eye wear
I. Uncharted Play	h. skills-based volunteer marketplace
J. Global Health Corps	i. extreme poverty and preventable disease
K. Purpose	j. human health and well-being

Problem solving Scenario

Pre-task:
Steps of problem solving
1. What is the problem? Identify.
2. What are the options/possible solutions?
3. What are the consequences of each?
4. Brainstorm for the solutions.

5. Analyze and review on the appropriate solution.

Do you consider yourself a critical thinker? Try solving these problems. The ability to think clearly and rationally involves pondering on the following questions:

- What is it about?
- Do we know….?
- How do we know?
- Is it possible that….?
- Any other idea?
- Any hypotheses?

There are six eggs in the basket. Six people each take one egg, how can it be that one egg is left in the basket?

Critical thinkers look at things differently:

Test your understanding with practice problems and step-by-step solutions. Go through each of

these given situations and arrive at an appropriate solution. Choose the correct answer based on the given context.

A.

9. A factory was trying out a new process for producing one of its products, with the goal of reducing production costs. A trial production run using the new process showed a fifteen percent reduction in costs compared with past performance using the standard process. The production managers therefore concluded that the new process did produce a cost savings.

Question: Which of the following, if true, casts most doubt on the production managers' conclusion? Explain how you arrived at the solution.

a. In the cost reduction project that eventually led to the trial of the new process, production managers had initially been seeking cost reductions of fifty percent.

b. Analysis of the trial of the new process showed that the cost reduction

during the trial was entirely attributable to a reduction in the number of finished products rejected by quality control.

10. Property taxes are typically set at a flat rate per Rs. 10,000 of officially assessed value. Reassessments should be frequent in order to remove distortions that arise when property values change at differential rates. In practice, however, reassessments typically occur when they benefit the government—that is, when their effect is to increase total tax revenue.

Question: If the statements above are true, which of the following describes a situation in which a reassessment should occur but is unlikely to do so?

5. Property values have risen sharply and uniformly.
6. Property values have all risen—some very sharply, some less so.
7. Property values have for the most part risen sharply; yet some have dropped slightly.
8. Property values have for the most part dropped significantly; yet some have risen slightly.
9. Property values have dropped significantly and uniformly.

Reference: https://www.gmac.com/executive-assessment/prepare/verbal-section/critical-reasoning- sample-questions

11. To persuade consumers to buy its personal computers for home use, SuperComp has enlisted computer dealers in shopping centers to carry its product and launched a major advertising campaign that has already increased public awareness of the SuperComp brand. Despite the fact that these dealers achieved dramatically increased sales of computers last month, however, analysts doubt that SuperComp's products accounted for much of that increase.

Question: Which of the following, if true, best supports the claim that the analysts' doubt is well founded?

a. In market surveys, few respondents who had been exposed to SuperComp's advertising campaign said they thought there was no point in owning a home computer.
b. People who own a home computer often buy a second such computer, but only rarely do people buy a third computer.c.SuperComp's dealers

also sell other brands of computers that are very similar to SuperComp's but less expensive and that afford the dealers a significantly higher markup.

d. The dealers who were chosen to sell SuperComp's computers were selected in part because their stores are located in shopping centers that attract relatively wealthy shoppers.

e. Computer-industry analysts believed before the SuperComp campaign began that most consumers who already owned home computers were not yet ready to replace them.

Creative problem solving involves the following steps:

Step 1: Clarify and identify the problem: Start by asking the question why? For each answer keep asking the 'why' question. After obtaining sufficient answers ask 'what else?' or "What do I really wish to accomplish?", "What is preventing me from solving this problem/achieving the goal?", "How do I envision myself in six months/one year/five years [choose most relevant time span] as a result of solving this problem?" and "Are my friends dealing with similar problems? If so, how are they coping?".

Step 2: Research the problem: Search engines, libraries, books, journals, online discussion forums, research articles, information and opinions from friends, colleagues and family are sources to obtain more information about the problem.

Step 3: Formulate creative challenges: Turn the issues into creative challenges. Creative challenges should not include evaluation criteria. For example: "How might I find a more challenging job that is better paying and situated close to my home?" If you put criteria in the challenge, you will limit your creative thinking. So simply ask: "How might a I find a more challenging job?" and after generating ideas, you can use the criteria to identify the ideas with the greatest potential.

Step 4: Generate ideas: Take one creative challenge and generate at least 50 ideas that may or may not solve the challenge if you are working alone. If you are working as a team limit the brainstorming from 15-20 minutes. Ensure that no one criticizes anyone else's ideas in any way. This is called squelching, because even the tiniest amount of criticism can discourage

everyone in the group for sharing their more creative ideas. If you run out of ideas sleepover the problem and the next day you will be able to generate fresh ideas.

Step 5: Combine and evaluate the ideas: Evaluate each idea on a scale of 1 to 5. The ideas with the highest evaluation score are your best bet. A SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis on complex ideas will be more effective. If the idea is business related, you may need to do a business case, market research, build a prototype or a combination of all of these. You do not need to limit yourself to one winning idea. Often you can implement several ideas in order to solve your challenge.

Step 6: Draw up an action plan: Draw up an action plan with the simple steps you need to take in order to implement your ideas. Ideas that involve a lot of work to implement can be particularly intimidating. Breaking their implementation down into a series of readily accomplished tasks makes these ideas easier to cope with and implement.

Step 7: Do it! (implement the ideas): Take your action plan and implement your idea. And if the situation veers away from your action plan steps, rewrite your action plan!

[Attribution: https://innovationmanagement.se/imtool-articles/the-basics-of-creative-problem- solving-cps/]

Misleading advertisements

Misleading advertisements should be banned. Look at the essay discussing some of the eminent problems associated with it and the possible solutions to overcome the issue.

Any advertisement or promotion through television, radio, or any other electronic media, wall- writing etc. to misrepresent the nature, characteristics, services or commercial activities so as to mislead the consumer could be broadly defined as a misleading advertisement. In fact, the false and misleading advertisements violate the right choice, the right to be informed and protected

against unsafe goods and services as well as unfair trade practices.

The main problems caused by misleading advertising include misrepresenting sales price, false claim about the features of a product, hidden information, use of cinematic tricks, misleading images etc. Among the prevalent forms of misleading advertisements, is the case of advertisements on milk and its impact on children. Several advertisements on milk products claim that their products enhance performance during sports. Similarly, the advertisements on fairness creams, bodybuilding by popping pills or the claims by unscrupulous financial institutions regarding giving unrealistic higher returns on investments can lead to customer disappointment, change of purchase trends of the consumer and also creating a false hype, which could lead to trust issues on the product. Misleading ads have always been a major issue to the society and its people.

Even though some advertisements are compliant to the standard, people are misled by them due to the usage of medical terms such as "clinically proven". As it tends common people to think they are scientifically tested products whereas it merely means it responds physically.

There are several measures taken by the Department of Consumer Affairs to tackle the menace of misleading advertisements under the Consumer Protection Act 2007. The department is also keen on developing a web portal which would enable consumers to lodge complaints against misleading advertisements. In my opinion, the best solution to these problems is to introduce strong laws against the companies that play with the quality and effects of the product in promotion time.

To conclude, there are a number of legislations that have provisions to deal with misleading claims and advertisements nonetheless they are punished with an imposition of fine. There must be an effective action against those advertisers in order to stop promoting false advertisement. Harsh punishment for

misleading advisements will make the marketing companies to think before getting such advertisements to the people's forum.

A. Find a solution for each of the following problems using your critical thinking skills and attempt an essay on it.

1. Pandemic has changed the face of Indian labourers. Identify one or two serious issues and suggest ways that can help governments and individuals to tackle these problems.

2. Nowadays many people have access to online stores on a wide basis and a vast majority of people make use of them. What are the negative impacts on the small businesses and what can be done to minimize the impact on the retailers?

3. Across the world, we have witnessed market meltdown triggered by Covid-19. What problems will this cause for individuals and society? Suggest some measures that could be taken to reduce the impact of global recession.

4. With the development of social media the nature of corporate disclosure has changed; vital information on stock predictions are being exchanged in the social media platforms causing a positive or negative rippling effect. What solutions can you suggest to deal with this problem?

5. Social distancing, self-isolation and travel restrictions have led to a reduced workforce resulting in an increased delay in the production sectors. What solutions can you offer to resolve this issue?

READ, EXPLORE, INNOVATE

The following books and channels are recommended for you to widen and expand your learning experience:

Books:

1. Shiv Khera – *You Can Win*
2. Robin Sharma – *The Monk Who Sold His Ferrari*
3. A.P.J. Abdul Kalam – *Ignited Minds*
   - *Wings of Fire*
4. Richard Back – *Jonathan Livingston Seagull*
5. Med Serif – *How to Manage Yourself*

ENGLISH FOR ARTS AND SOCIAL SCIENCES

TAMIL NADU STATE COUNCIL FOR HIGHER EDUCATION (TANSCHE)

SYLLABUS

PROFESSIONAL ENGLISH FOR ARTS & SOCIAL SCIENCES

OBJECTIVES:

- To develop the language skills of students by offering adequate practice in professional contexts.
- To enhance the lexical, grammatical and socio-linguistic and communicative competence of first year physical sciences students
- To focus on developing students' knowledge of domain specific registers and the required language skills.
- To develop strategic competence that will help in efficient communication
- To sharpen students' critical thinking skills and make students culturally aware of the target situation.

LEARNING OUTCOMES:

- Recognise their own ability to improve their own competence in using the language
- Use language for speaking with confidence in an intelligible and acceptable manner
- Understand the importance of reading for life
- Read independently unfamiliar texts with comprehension
- Understand the importance of writing in academic life
- Write simple sentences without committing error of spelling or grammar

  (Outcomes based on guidelines in UGC LOCF – Generic Elective)

NB: All four skills are taught based on texts/passages.

UNIT 1: COMMUNICATION

Listening: Listening to audio text and answering questions
- Listening to Instructions
Speaking: Pair work and small group work.
Reading: Comprehension passages –Differentiate between facts and opinion
Writing: Developing a story with pictures**.**
Vocabulary: Register specific - Incorporated into the LSRW tasks

UNIT 2: DESCRIPTION
Listening: Listening to process description.-Drawing a flow chart.
Speaking: Role play (formal context)
Reading: Skimming/Scanning-
    Reading passages on products, equipment and gadgets.
Writing: Process Description –Compare and Contrast
    Paragraph-Sentence Definition and Extended definition-

Free Writing.
Vocabulary: Register specific -Incorporated into the LSRW tasks.

UNIT 3: NEGOTIATION STRATEGIES

Listening: Listening to interviews of specialists / Inventors in fields
                  (Subject specific)
Speaking: Brainstorming. (Mind mapping).
                Small group discussions (Subject- Specific)
Reading: Longer Reading text.
Writing: Essay Writing (250 words)
 Vocabulary: Register specific - Incorporated into the LSRW tasks

UNIT 4: PRESENTATION SKILLS

Listening: Listening to lectures.
Speaking: Short talks.
Reading: Reading Comprehension passages
Writing: Writing Recommendations
              Interpreting Visuals inputs
Vocabulary: Register specific - Incorporated into the LSRW tasks

UNIT 5: CRITICAL THINKING SKILLS

Listening: Listening comprehension- Listening for information.
Speaking: Making presentations (with PPT- practice).
Reading : Comprehension passages –Note making.
            Comprehension: Motivational article on Professional Competence,
            Professional Ethics and Life Skills)
Writing: Problem and Solution essay– Creative writing –Summary writing
Vocabulary: Register specific - Incorporated into the LSRW tasks

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Unit 4	70-81
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PREFACE

The textbook on Professional English envisioned under the leadership of the Hon. Chief Minister of Tamilnadu, Thiru. Edappadi K.Palaniswami by the Honorable Minister for Higher Education Thiru. K.P. Anbalagan, and Principal Secretary to Government, Department of Higher Education, Selvi. Apoorva, I.A.S., is a pioneering venture and strategic intervention in higher education in Tamil Nadu. It has been prepared with the unstinted support of Thiru. Vivekanandan, I.A.S. Member Secretary, TANSCHE (Tamil Nadu State Council for Higher Education)

Tamil Nadu has the distinction of having the highest GER (Gross Enrolment Ratio) of 49%, in higher education in the country: this figure attests to the efforts of the government to empower the youth of the state by enhancing access to higher education.

After duly examining the challenges faced by students in learning their subjects and with a vision to equip them to compete in a global scenario, four textbooks, *English for Physical Science, English for Life Sciences, English for Arts and Social Sciences* and *English for Commerce and Management* have been prepared.

As language is an essential tool with regard to the learning process, a textbook which uses subject/discipline based content to leverage language learning is an ideal approach and fulfills the dual objective language proficiency and professional competence.

This book is bound to fulfill its destiny as teachers and students work in tandem: teachers as facilitators and learners as highly motivated stakeholders.

DISCLAIMER

Some of the passages given for Listening, Speaking, Reading and Writing lend themselves to the teaching of Grammar items. However, testing and evaluation does not include Grammar.
This material is not for publication: it is only for training purposes.

UNIT 1

COMMUNICATION

Syllabus

Listening - Listening to audio text and answering questions

- **Listening to Instructions**

Speaking – Pair work and small group work.

Reading – Comprehension passages –Differentiate between facts and opinion

Writing – Developing a story with pictures.

Vocabulary: Register specific - Incorporated into the LSRW tasks

Preparatory Activity

Ask the students to read the following quotes and choose the one they like the most. They have to give reasons for their choice.

1. Our greatest glory is not in ever falling, but in rising every time we fall. (Confucius)
2. Those who do not remember the past are condemned to repeat it. (George Santayana)
3. People without their knowledge of their past history, origin and culture is like a tree without roots. (Marcus Garvey)
4. History will have to record that the greatest tragedy of this period of social transition was not the strident clamour of the bad people, but the appalling silence of the good people. (Martin Luther King Jr.)
5. The more you know of your history, the more liberated you are. (Maya Angelou)

Pre-Listening Activity

Match the words in Column A with their meanings in Column B

Column A		Column B
(1)	Medieval	Settle and establish control over a place and its people
(2)	Post-colonial	Process of dividing history into periods
(3)	Subaltern	A line of hereditary rulers of a country
(4)	Colonise	Relating to Gandhi's character or values
(5)	Pre-historic	Old-fashioned
(6)	Dynasty	Belonging to a very distant past
(7)	Periodization	Occurring after the colonial rule
(8)	Gandhian	Bringing a place or people to a

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		stage of social and cultural development
(9) Civilizing		Period before written records
(10)Ancient		Someone who has been marginalized or oppressed

LISTENING:

A. Listen to the talk on Periodization of History and answer the questions given below:

Transcript of the Listening Passage:

Periodization of History

As all disciplines have divisions, History does have its own divisions and these divisions are known as Periodizations. History is periodised as Pre-History, Ancient, Medieval, Modern, Colonial, Post-Colonial and Subaltern, etc., This periodization is not uniform and its varies from country to country. This periodisation was done by the European Historians and was accepted by all. Pre-History is the history of society where there is no written evidence to know their life style. By the end of the 16th and early 17th century European Historians brought the timeline in History as Ancient, Medieval and Modern. With the rise of Islam in the 7th century, Islam gave its own time-line starting from the Hijri era. Hijira is the flight of Prophet Muhammad from Mecca to Medina in 622. This event is taken as the beginning of Islam. But the Hijra era was restricted to the Islamic World. The vastly used periodization of Indian History is not done by us but by the British. When the British colonised India they also decided to colonise the body and the mind of the natives. In order to legitimise their political power and to show their presence as civilizing missions, James Mill in 1818 provided a Tripartite periodization of Indian history, where he divided the history of India into Hindu, Muslim and British period. The early Indian nationalist historians replaced the tripartite division based on the dynastic histories as Ancient, Medieval, and Modern, that is, Hindu, Muslim, and British. The periods have their own sub divisions such as the period of 1919-1947 in the Modern period is known as the Gandhian Phase or the Gandhian era.

1. Based on the passage you listened to state whether the following statements are True or False:

   a. The periodization of Indian history into Hindu, Muslim and British was done by Indian scholars

   b. Pre – history predates 'writing': it has no written records

   c. The Prophet Muhammad took flight from Medina to Mecca

   d. Colonisation by the British was more than colonization of territory: the mind and body are also colonized

   e. The Gandhian age began after 1947

2. Complete the table based on the talk you heard:

Periodization according to European historians is	
Timeline followed by Islamic countries was	
Tripartite periodization is	
Gandhian phase is	

3. Compete the timeline about Mahatma Gandhi – Birth, Education, Marriage, South Africa, Freedom Fight, and Death.

Born at Porbundar , Gujarat

Assassinated

1869

1948
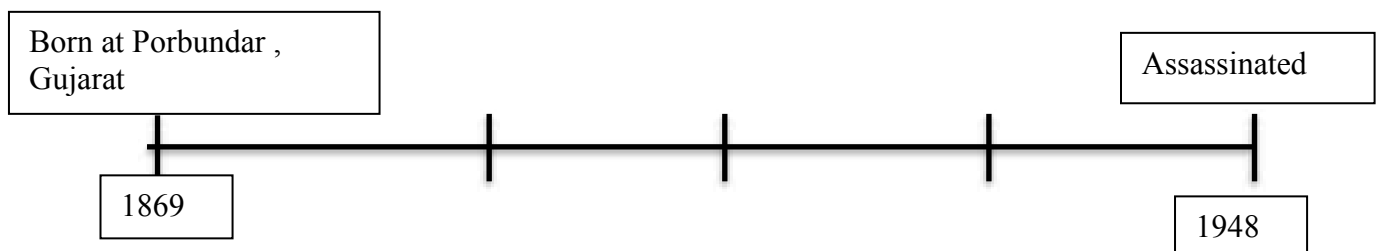
B. Listen to the following instructions given before examination.

Transcript for Listening:

Instructions to candidates before the Competitive Examination

- ➤ Write your roll number, ticket number, date, time and venue for the examination as given in the Admission Certificate.
- ➤ Do not be late for the exam. Report half an hour before the exam. Latecomers will not be allowed to write the exam.
- ➤ Bring your admission certificate with photographs.
- ➤ Do not bring mobile phones, pagers or calculators inside the exam hall.
- ➤ Use black ink pen or ball point pen for filling up your answer sheet.
- ➤ Do not leave the hall before you complete filling up all your answers.
- ➤ Hand over the answer sheet with extreme care and keep it dust-free.
- ➤ Do all your rough work in the test booklet.
- ➤ Return your test booklets along with your answer sheets.
- ➤ Mark all your answers only in the answer sheet, not in the test booklet.

Imperatives

Imperatives are verbs used to give orders, commands, warning or instructions. At times even modals (like should, must etc.) are used to for giving instructions. But the use of imperatives helps in the clarity of instructions.

Post-Listening Activity

(1)   In the list of instructions you heard, every instruction starts with an imperative verb. List out the imperative verbs you heard:

_____

_____

_____

_____

_____

(2)   Write a list of five instructions you would give to your younger brother who is going to write his board exam. Your instructions should start with imperative verbs.

(a)_____

(b) _____

(c)_____

(d)_____

(e)_____

SPEAKING – Preparatory Activity

1. Look at the following smiley images and write what do they express – fear? Anger? Or any other emotion?

2. Vocabulary

Look at the new words and their meanings for your reference

New words	Meanings
Adaptive	changing/adapting ones' attitude
Physiology/Physiological	reaction in the body
Psychology/Psychological	affecting, or arising in the mind; related to the mental and emotional state of a person.
Acceptance	the act/attitude of accepting

Anticipation	expecting/predicting an arrival

Read the following passage on different emotions and answer the following questions:

ELEMENTS OF EMOTION

Adaptive
Emotion can be adaptive and help us deal with changing environment or stress, by repressing emotion (diluting its intensity or significance) or by over-reacting (working faster and harder, seeing stress as a challenge).

Physiological changes
It is involuntary reaction of the body. Changes within the body are a major element of fear, anger, joy, and other emotions. These include changes in heart rate, blood pressure, perspiration, and other bodily stirrings. Most of these reactions are caused by release of adrenaline into the bloodstream. Adrenaline is a hormone that stimulates the sympathetic nervous system, which in turn activates the body.

Emotional expressions
Outward signs of what a person is feeling - communication. These are another major element of emotion. Hands tremble, face contorts, posture becomes tense and defensive when intensely afraid. Emotion is also revealed by marked shifts in voice tone or modulation. Other signs of emotion range from shrill rage to the surprisingly subdued last words on flight recorders after air disasters (a common last word is "Damn," spoken calmly). Expressions of emotion are important because they communicate emotion to others.

Emotional feelings
A person's private emotional experience determines how he or she will respond to a situation.

Primary Emotions
Robert Plutchik (1980) concluded from research that there are 8 primary emotions, and each can vary in intensity (anger may vary from rage to annoyance) : fear, surprise, sadness, disgust, anger, anticipation, joy, acceptance.

Mixed Emotions
Plutchik felt that adjacent emotions can be mixed to yield a third,

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more complex emotion. And other mixtures are also possible. A child about to eat a stolen cookie may feel both joy and fear. The result? Guilt.

    Awe - mixture of Fear and
    Surprise Disappointment -
    mixture of Surprise and sadness
    Remorse - mixture of Sadness
    and disgust Aggression -
    mixture of Anger and
    Anticipation
    Jealousy - mixture of love,
    anger, and fear. Optimism -
    mixture of Anticipation and Joy
    Contempt - mixture of Disgust
    and Anger Submission - mixture
    of Acceptance and Fear
    Love - mixture of Joy and Acceptance

With that said, here are 10 of the most universal emotions and what they mean: Happiness which is one of the first core emotions we all experience, Sadness, Anger, Anticipation, Fear, Loneliness, Jealousy and Disgust.

Speaking Activities:

1. Language game - Enacting an Emotion

   Students are divided into groups with 5-8 students in each group. Each group will choose one emotion from the passage and enact it in front of the class without uttering a single word. Seeing the body language and facial expressions, other groups should guess the emotion. The group that gets it right will be awarded marks.

2. Role play

   Students can choose either one of the scenario for enacting the role play.

   (a)   A student has forgotten to submit his assignment for second time. The teacher is very angry. The student should try to persuade the teacher to give him more time.

   (b)   Two students are caught by the teacher for copying in the exam hall. They are taken to the principal room by the teacher. Students have to escape the situation with humour.

   Students can decide their roles, write down the dialogues, practice it with each other and then when called, should enact it in front of the class. There should be a minimum of six exchanges between them.

Situation 1:

Teacher: Where is the English Assignment?

Student: Isn't the deadline to submit tomorrow mam?

Teacher: (angrily) _____

Student: _____

Teacher: _____

Student: _____

Teacher: _____

Student: _____

Teacher: _____

Student: _____

Teacher: _____

Student: _____

READING ACTIVITY

Pre-reading Activity

A. Pair Activity
Look at the picture below and guess what is it about? Discuss the picture with your neighbor and frame one sentence each about the picture

B. Choose the right word for the given meanings from the list of words given below:

> Commercial, coined, inaccessible, nausea, fatigue, prestige, controversial, survive, excrement, ascents

(i)   Making up something -

(ii)   Extreme tiredness -

(iii)   Something that is debatable -

(iv)   Feces -

(v)   Anything that is used to make money -

(vi)   Reputation or stature -

(vii)   Stay alive -

(viii) Difficult to reach -

(ix)   Scaling -

(x)   Vomiting –

Reading Passage 1

Read the passage and answer the following questions:

MOUNT EVEREST

Mount Everest is the tallest mountain on Earth-it's peak is almost 30,000 feet above sea level, or almost as high as **commercial** airplanes fly. The mountain is part of the Himalayas mountain range, and located on the border between Nepal and China.

The Mountain is known by various names by the local people who live around it. The name 'Everest' was **coined** in 1865 by Andrew Waugh, who was the British Surveyor General of India-as India was a British colony at the time, Andrew chose 'Everest' as it was the last name of the man who held his position before him, Sir George Everest.

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Everest has been difficult to climb for several reasons, aside from the actual distance there is to climb. The first is weather-the mountain is **inaccessible** for half of the year because of heavy snow and wind. The second is altitude. The mountain is so high that the air at the top is much thinner than the air at the bottom. This means that people climb higher up than 80,000 feet can get altitude sickness. Symptoms of altitude sickness include headaches, **nausea**, dizziness, sweating, nosebleeds, **fatigue**, and insomnia. This is because the air is so thin that the heart does not have enough oxygen to fuel the muscles. More serious cases of altitude sickness can even result in death.

The reason for climbing Everest was prestige, especially national **prestige**. The British wanted to show that they were masters of the world by climbing its tallest mountain. The first recorded attempt to climb Everest was by British mountaineers in 1921, though they climbed to only 22,000 feet. A **controversial** attempt took place in 1924, George Mallory and Andrew Irvine set out to scale the mountain and disappeared. Only Mallory's body was discovered in 1999. It is possible that Mallory and Irvine were the first to reach the peak of Everest, but as they did not **survive** to tell the tale, it remains a mystery.

The first group, Tom Bourdillon and Charles Evans, both British, got within 300 feet of the peak but were forced to turn back. The second group, made up of Edmund Hillary, from New Zealand, and Tenzing Norgay, a Sherpa climber from Nepal, climbed up next. Bourdillon and Evans had planted supplies and found a route up the mountain, and these supplies helped Hillary and Norgay on their trip up. They climbed the peak in 1953. They took photos, buried some items in the snow to prove they were there, and made the trip down. More than 4000 people have reached the top since 1953. These climbs have increased the

problems of pollution. It is reported that 26000 pounds of human **excrement** is left behind on the mountain each year.

Apa Sherpa, and Phurba Tashi, both Nepalese, are tied for the record of most times climbed Everest-with 21 **ascents** to the top.

Answer the following questions based on the passage given above:

(1) Where is Mt.Everest located?

    (a)   India   (c) Nepal

    (b)   Between India and Nepal border   (d) Between Nepal and China border

(2) Everest is so named because

    (a)   It means 'highest peak'   (c) of a British official who was Surveyor General

    (b)   British liked to give English names (d) British Surveyor wanted his name to be given

(3) According to the passage, which one of the following is NOT a factor that contributes to the difficulty in climbing Mt.Everest?

    (a)   The very cold weather with heavy snow and winds prevail in the region.

    (b)   The grizzlies are dangerous to people who climb these mountains.

    (c)The distance to climb is not a short one.

    (d)   Nausea and dizziness are some of the effects when one climbs a high mountain.

(4) What makes people to climb such high mountains?

    _____

    _____

    _____

    _____

_____

(5)   Who are Sherpas?

_____

_____

_____

_____

(6)   Who was the first person to climb Mt.Everest?

_____

_____

_____

_____

(7)   Complete the table based on the passage and if possible, collect more information from online resources or books etc.

Name of the person who climbed Mt.Everest	The country he / she belongs to	Did the person succeed or not?

(8)   You and your friends are planning to climb a small mountain near your place. As the captain of the team, write a set of five instructions to be followed by your friends while climbing the mountain. Start your instructions with imperative verbs.

The first one is given as an example. Write the rest of the instructions.

(i)   Bring torch and first aid materials while climbing.

(ii)   _____.

(iii)   _____.

(iv)   _____

(v)   _____

Reading Passage 2

Pre-reading Activity

During lockdown, apart from cleaning their houses, people spent their time reading books, watching TV, browsing websites, using social media, gaming etc. How did you spend your days during lockdown?

Draw a pie chart to describe a day in lockdown. It should depict what you usually do in those lockdown days. After completing your pie diagram, share it with your friend and see how long each one has spent in using electronic gadgets? Report to the classroom to see who has spent the most number of hours in using electronic gadgets like TV, mobile phone, laptop etc.

An Average Day during Lockdown
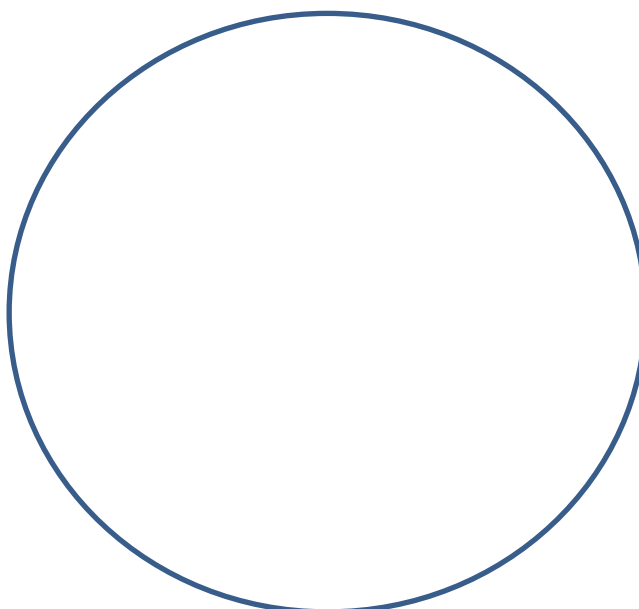
Reading

Impact of Internet Addiction on Academic Performance

There have been many research studies conducted on how Internet **addiction** would **impact** on academic performances. Post-covid era, using technology and online resources have become a necessity for all people around the world. In the early 2000s, Internet usage was not that high in India but it has been steadily increasing in the past few years and post-covid times, it has zoomed very high. Today online communication has become an accepted form of information exchange and networking among working professionals, students and others. We have **homemakers** having their own YouTube channels where they upload their cooking or Giving Tips videos. These tips can be for beauty, health, and environment or even on political issues. Internet has given voice to common people and they are **utilizing** it to the maximum. But even a good thing can remain good only if it is used **judiciously**. When the usage becomes **extreme**, then it becomes an addiction. Though it impacts everyone, in case of students the impact is visible in their academic performance.

Researchers have said that Internet addiction could impact academic performance; early detection is **crucial.** This was the finding about Internet Addiction (IA) which was published in peer-reviewed journal in 2018. According to the research there is a positive **correlation** between IA and psychological **distress**. The article further states that, if Internet Addiction is not detected early, it will affect academic performance of the students. Various studies were conducted by healthcare institutions and other leading Psychological institutes in Southern Indian states. It proved that IA leads to psychological distress (depression) among students. The study was conducted among professional students who did medicine and engineering. Likewise, it was also conducted among large group of students undergoing undergraduate courses in south India.

Internet has become the best friend and guide to majority of the people around the world. Still, one major **downside** is that it causes severe mental health condition among students. In fact, researchers reveal that students suffer from psychological distress and their long-term career goals are affected by this addiction. Steps need to be taken in the early stage to control this problem.

A. Vocabulary

Find the contextual meaning of the words taken from the passage. You can use dictionaries for this purpose.

1. Addiction
2. Impact
3. Homemaker
4. Utilizing
5. Judiciously
6. Extreme
7. Correlation
8. Distress
9. Crucial
10. Downside

B. What are the problems the author feels Internet addiction would lead to?

_____

_____

_____

C. In the above passage which items are facts and which ones are opinions of the author. Differentiate between fact and opinion in the table below:

FACTS	OPINIONS

D. Group Work:

Do you agree with the author that Internet addiction is bad for students in particular? If yes, can you suggest some ways to address this problem? If no, give reasons for your viewpoint. Discuss these in groups and present your findings to the class.
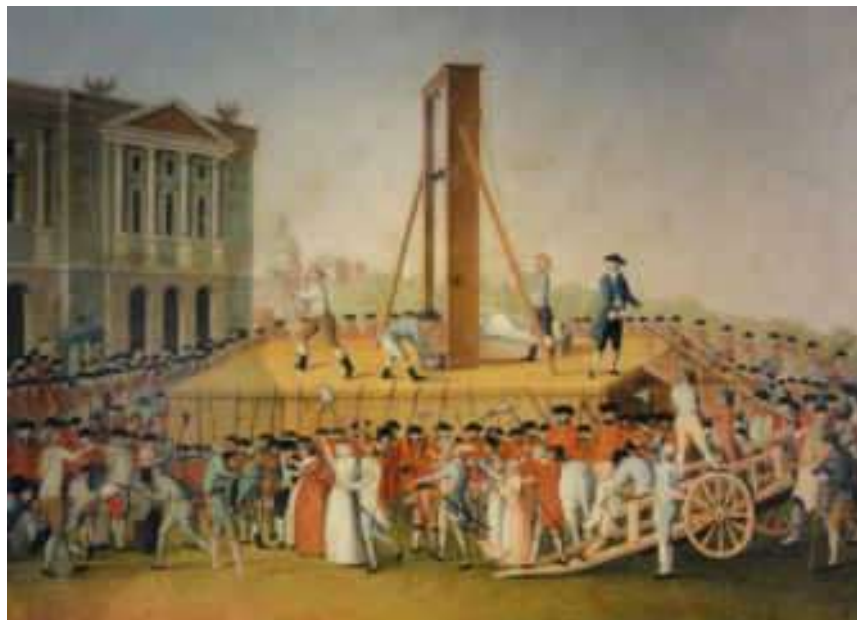
WRITING

Pre-Writing Activity

A. Look at the pictures below and try to find who they are and what are they famous for?

B. Now look at the following pictures. Can you guess the historic event shown in these pictures? What do you think is depicted in these pictures?

The Storming of the Bastille

People guillotined

Read the following passage on French Revolution and answer the questions given below:

A Revolution that lasted 10 years

The French Revolution lasted from 1789 to 1799. It began on July 14, 1789 when revolutionaries stormed a prison called the Bastille. The revolution came to an end 1799 when the famous General, Napoleon overthrew the revolutionary government and established the French Consulate and he became its leader.

The Three Estates

Prior to the revolution, the people of France were divided into social groups called "Estates." The First Estate included the clergy (church leaders), the Second Estate included the nobles, and the Third Estate included the commoners. Most of the people were members of the Third Estate. Sadly, it was the Third Estate which paid most of the taxes, while the nobility lived lives of luxury and got all the high-ranking jobs. This was totally unjust.

The formation of The Directory

Representatives from the Third Estate established the National Assembly where they demanded that King Louis XVI give them certain rights. This group soon took control of the country. They changed names over time to the Legislative Assembly and, later, to the National Convention. After the Reign of Terror, a new government was formed called the Directory. The Directory ruled until Napoleon took control.

Reign of Terror

The darkest period of the French Revolution is called the Reign of Terror which lasted from 1793 to 1794. During this time, a man named Robespierre led the National Convention and the Committee of Public Safety. He wanted to stamp out any opposition to the revolution, so he called for a rule of "Terror." Laws were passed that said anyone suspected of treason could be arrested and executed by guillotine. Thousands of people were executed including Queen Marie Antoinette and many of Robespierre's political rivals.

Political Clubs

Many of the new political ideas and alliances of the French Revolution were formed in political clubs. These clubs included the powerful Jacobin Club (led by Robespierre), the Cordeliers, the Feuillants Club, and the Pantheon Club.

Outcome

"Liberty, Equality, Fraternity" was the motto of the French Revolution: it completely changed the social and political structure of France. It put an end to the French monarchy, feudalism, and took political power from the Catholic church. It initiated the decline of monarchy and the trend towards establishment of democracies. It brought new ideas to Europe including liberty and freedom for the commoner as well as the abolishment of slavery and the rights of women. Although the revolution ended with the rise of Napoleon, the ideas and reforms did not die. These new ideas continued to influence Europe and helped to shape many of Europe's modern-day governments.

A. The discontent with the French monarchy and the poor economic policies of the King was the cause for French Revolution. Nobilities lived a life of luxury and common people lived in poverty. Make three comparative statements about life of luxury and a life of poverty and complete the following table.

Life of Luxury	Life of Poverty

B. In France, at the time of the Revolution, there were "three estates". Based on this terminology, there is a "fourth estate" in modern society. Find out what is the "fourth estate" and write a few lines about it.

_____
_____

_____
_____

_____
_____

_____
_____

_____

_____

C. Why was one period called as 'Reign of Terror'?

_____

_____

_____

_____

_____

_____

D. What do you know about slavery? Was it restricted only to France? What role did Abraham Lincoln play in the topic of slavery?

_____

_____

_____

_____

_____

_____

E. Look at the following pictures and develop a story based on these pictures:

UNIT 2

DESCRIPTION

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Syllabus

Listening - Listening to process description.-Drawing a flow chart.

Speaking – Role play (formal context)

Reading – Skimming/Scanning-

        Reading passages on products, equipment and gadgets.

Writing – Process Description –Compare and Contrast

        Paragraph-Sentence Definition and Extended

</div>

Preparatory Activity

Online Shopping

The process of buying a product online is given in sentences which are jumbled in the box. Rearrange them in the right order so that it forms a meaningful description of the online buying process.

> 6. Next, search for the product you want to buy within the website.
> 7. Select credit card/ debit card / net banking option.
> 8. After you enter the card / bank details, OTP will be generated which has to be submitted in the respective section.
> 9. You will receive your confirmation message in your email and phone which has to be saved for further transaction.
> 10. Add the product to your cart and then click on the cart image.
> 11. Once your OTP is submitted, your payment process is confirmed.
> 12. First, open the e-commerce website that sells the product you want to buy.
> 13. Next step is to choose the payment option.
> 14. Give the necessary details in your bank page or card details in the respective section.
> 15. Choose the variety you want from the listed products.

LISTENING:

C. Listen to the talk on Cartographic Process and answer the questions given below:

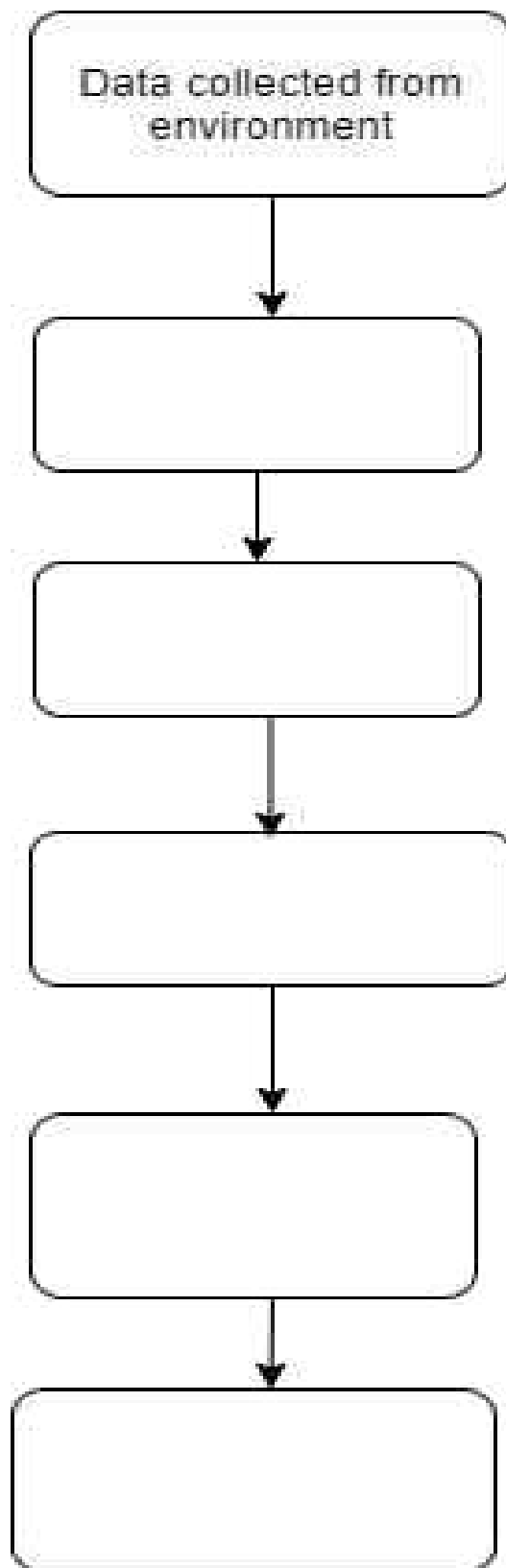**Transcript of the Listening Passage:**

The Cartographic Process

Maps have played a significant role in the advancement of civilisation. They played an important role in navigation and voyages of discovery by sea. Cartography was an art that required a scientific mind and an artistic hand. Today, however, maps can be produced with online tools. Maps are used in a wide range of activities (from urban planning, through geological exploration or environmental management, to trip planning and navigation). Cartography, though now easier than in ancient times, is still the domain of professionals with expertise in mapping or in the phenomena being depicted on the maps. It has been said that cartography is as a process that links map makers, map users, the environment mapped, and the map itself.

The cartographic process is a cycle that begins with a real or imagined environment. Data is collected from the environment (through technology and/or remote sensing). These experts then use their perception to detect patterns in the data collected and subsequently prepare the data for map creation (i.e., they think about the data and its patterns as well as how to best visualize them on a map). Next, the map maker uses the data and attempts to signify it visually on a map (encoding), applying generalization, symbolization, and production methods that lead to a depiction that can be interpreted by the map user in keeping with the purpose which the map maker intended. Next, the map user reads, analyzes, and interprets the map by decoding the symbols and recognizing patterns. Finally, users make decisions and take action based upon what they find in the map. Through their provision of a viewpoint on the world, maps influence our spatial behavior and spatial preferences and shape how we view the environment.

While -Listening Activity

A. Complete the flowchart as you listen to the Cartographic Process

```
┌─────────────────────────┐
│   Data collected from   │
│       environment       │
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33

Speaking

Read the following extract from 'Hard Times' written by Charles Dickens

He was a rich man: banker, merchant, manufacturer, and what not. A big, loud man, with a stare, and a metallic laugh. A man made out of a coarse material, which seemed to have been stretched to make so much of him. A man with a great puffed head and forehead, swelled veins in his temples, and such a strained skin to his face that it seemed to hold his eyes open, and lift his eyebrows up. A man with a pervading appearance on him of being inflated like a balloon, and ready to start. A man who could never sufficiently vaunt himself a self-made man. A man who was always proclaiming, through that brassy speaking-trumpet of a voice of his, his old ignorance and his old poverty. A man who was the Bully of humility.

 A year or two younger than his eminently practical friend, Mr Bounderby looked older; his seven or eight and forty might have had the seven or eight added to it again, without surprising anybody. He had not much hair. One might have fancied he had talked it off; and that what was left, all standing up in disorder, was in that condition from being constantly blown about by his windy boastfulness.

In the formal drawing-room of Stone Lodge, standing on the hearthrug, warming himself before the fi re, Mr Bounderby delivered some observations to Mrs Gradgrind on the circumstance of its being his birthday. He stood before the fi re, partly because it was a cool spring afternoon, though the sun shone; partly because the shade of Stone Lodge was always haunted by the ghost of damp mortar; partly because he thus took up a commanding position, from which to subdue Mrs Gradgrind.

'I hadn't a shoe to my foot. As to a stocking, I didn't know such a thing by name. I passed the day in a ditch, and the night in a pigsty. That's the way I spent my tenth birthday. Not that a ditch was new to me, for I was born in a ditch.'

Charles Dickens

Pair Work:

Discuss the answers for the following questions with your partner:

(1)   Based on the passage, how old do you think Mr.Bounderby is?

(2)   In the above passage, choose four words or phrases which suggest that Mr.Bounderby is a very unpleasant man. Explain how the expressions give that suggestion.

(3)   Which line shows us that Mr.Bounderby as a bully?

(4)   What kind of childhood did Mr.Bounderby had?

(5)   Choose two phrases or expressions from the passage that suggest that the author is making fun of Mr.Bounderby.

> Role Play
>
> According to Cambridge English Dictionary, role play is defined as the act of "pretending to be someone else, especially as part of learning a new skill." It is the act of imitating the behaviour of someone or placing oneself in an imaginary situation especially as part of a training exercise or a language learning activity. It is a fun theatrical exercise that is a cross between improvisation and performing in a play. It blends creativity with structure to help actors hone their craft and is an important skill for an actor to develop. There are four types of role-play: conflict roleplay co-operative role play, information gap role play and task-based role play.

Sample 1

Given below is a role play between a student and faculty.

David is a student who wishes to clarify certain doubts about a seminar presentation with his Professor of English.

David: Good Morning Sir.

English Professor: Good morning David. How can I help you?

David: I have some doubts with regard to my seminar presentation. Can I work on the Theme of Nature in Wordsworth's Poetry?

English Professor: Yes, it sounds good to me. Do be specific on the poems you wish to discuss.

David: Can I get a week for preparation? Is the presentation for 15 minutes?

English Professor: Yes, take a week. The maximum time duration allowed is 15 minutes.

David: And one more thing, can I make a power point presentation Sir?

English Professor: A power point presentation is allowed.

David: Thank you Sir.

English Professor: You are welcome. All the best.

Explanation about Sample 1

In the above given role play, David, a student approaches his English professor and has his doubts clarified about his presentation. Modifications in the above role play are possible with different replies and responses. The learners can get creative and explore the possibilities and thus improve their fluency and vocabulary. This is more of task-based role play.

Sample 2

Given below is a role play between a Tourist guide and a tourist.

Mr. Manish Singh is a tourist visiting Mahabalipuram and Mr. Ravi is his tourist guide.

Mr. Ravi: Hello Sir. I am Ravi your tourist guide. Shall we begin our tour?

Mr. Manish Singh: Hello Mr. Ravi. Yes, I am looking forward to seeing this historical place.

Mr. Ravi: Mahabalipuram, is a town in Chengalpattu district in the south-eastern Indian state of Tamil Nadu. It is a UNESCO heritage site.

Mr. Manish Singh: Interesting! So, it is a historical site.

Mr. Ravi: Yes, it is. Neolithic burial urn, cairn circles and jars with burials dating to the 1st century BCE have been discovered near Mamallapuram, which is another name for Mahabalipuram.

Mr. Manish Singh: That is information to me Mr. Ravi.

Mr. Ravi: The temples of Mamallapuram, portraying events described in the Mahabharata, were built largely during the reigns of King Narasimhavarman and his successor Rajasimhavarman and show the movement from rock-cut architecture to structural building. The city of Mamallapuram was founded by the Pallava king Narasimhavarman I in the 7th century AD. Now that we have reached the site, let us see it in person.

Mr. Manish Singh: Yes, Indeed! Thank you.

Explanation about Sample 2

In the above given role play, Mr. Ravi, tourist guide is sharing information about Mahabalipuram with Mr, Manish Singh, tourist from Punjab. The role play can be engaging and interesting as it progresses and it can lead to information sharing and language learning. It can be either information gap role play or task based role play.

Role play Activity

Divide the class into groups of 5 or 6 students each. Ask them to choose either one of the following situations and design a role play. Each one should take one responsibility. If there are only 2 or 3 roles to enact, others should contribute in scripting and storytelling process.

a. A mentor expressing concern over the poor performance of his ward to him.

b. As the MLA of a constituency, debate over poor drinking water availability in your locality in the legislative assembly

c. Persuade the Bank Manager to increase the amount of the loan extended to you.

d. Discuss with your friends about the health hazards of smoking.

e. Insist to your peers the need to submit assignment on time.

READING

Pre-Reading Activity

Look at the bar chart below and write five sentences that you can infer from the bar chart. The first sentence is given as a sample for you.

Percentage of people using social media site
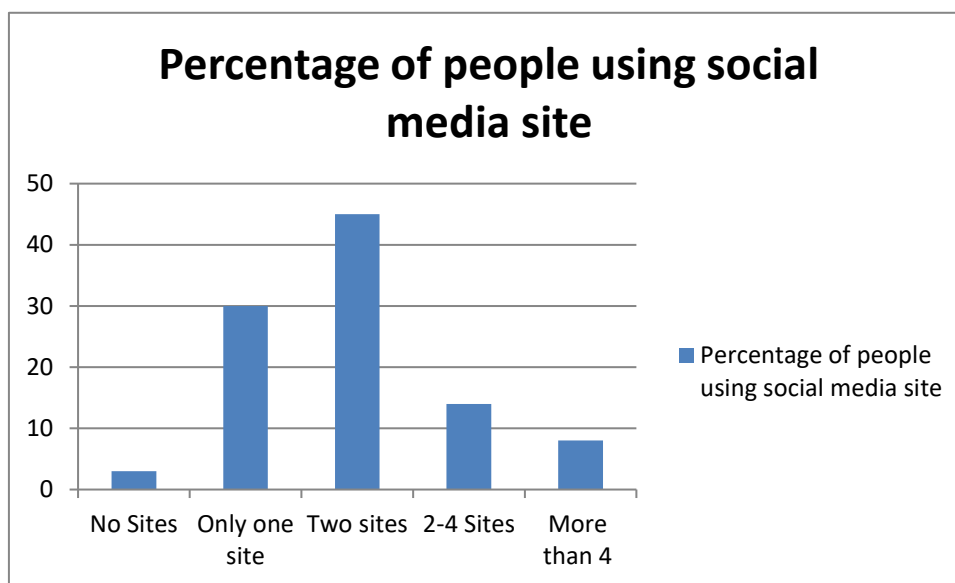
Inference from the bar chart
1. The percentage of people using more than two social media sites are the highest which shows that in spite of many social media sites available, people are not using all those sites.
2. _____
   _____
3. _____
   _____
4. _____
   _____
5. _____
   _____

Reading Passage 1

Read the following passage and make notes of the important points of the paragraph in the margin against each passage. After reading the passage, answer the questions given below:

SPSS STATISTICS SOFTWARE	Notes Section
SPSS Statistics is a software package used for interactive statistical analysis. The expansion of SPSS is "Statistical Package for Social Sciences." It was produced originally by SPSS Inc. In 2009, IBM acquired it. It is used not only in the social sciences but also by health researchers, survey companies, government, education researchers, marketing organizations, data miners. The original SPSS manual (Nie, Bent & Hull, 1970) has been described as one of "sociology's most influential books" for allowing ordinary researchers to do their own statistical analysis. In addition to statistical analysis, data management (case selection, file reshaping, creating derived data) and data documentation (a metadata dictionary is stored in the datafile) are features of the base software. This base software includes • Descriptive statistics: Cross tabulation, Frequencies and Descriptive Ratio Statistics • Bivariate statistics: Means, t-test and Nonparametric tests. • Prediction for identifying groups: Factor analysis, cluster analysis	

- Geo spatial analysis, simulation

SPSS Statistics places constraints on internal file structure, data types, data processing, and matching files, which together considerably simplify programming. SPSS datasets have a two-dimensional table structure, where the rows typically represent cases (such as individuals or households) and the columns represent measurements (such as age, sex, or household income). Only two data types are defined: numeric and text (or "string"). All data processing occurs sequentially case-by-case through the file (dataset). Files can be matched one-to-one and one-to-many, but not many-to-many. In addition to that cases-by-variables structure and processing, there is a separate Matrix session where one can process data as matrices using matrix and linear algebra operations

Post- Reading Activities

1. Based on the notes you made, write the main idea of the passage in not more than three sentences.

   _____
   _____
   _____
   _____
   _____
   _____

2. What are the uses of SPSS software?

   _____
   _____

_____

_____

_____

_____

3. What are the main features of basic SPSS software?

_____

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4. List three major limitations of using this software.

_____

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5. Based on the passage, who do you think would benefit from this software?

_____

_____

_____

_____

Reading Passage 2

Pre-reading activity

A. Vocabulary – Pair work

Each pair of students should take two words from the table and find the meaning from dictionary. Make one sentence each for each word. All words should be distributed among students. After they finish, each word meaning can be discussed in class so that all students are able to write the meaning of all given words.

Consume	Vary
Scarce	Monetary
Sacrifice	Allocation
Apportion	Generates
Assumptions	Efficiency
Rationality	Proportion
Interpretation	Consumption
Aggregated	Influenced

B. Look at the title of the passage

Fundamentals of Economics

What do you think the passage is about? Put down your ideas about the theme of the   passage before reading it.

_____
_____

_____
_____

Now read the passage thoroughly and try to answer the following questions:

Fundamental Economics

What is Economics?
Economics is concerned with how choices are made about the use of resources: what should be produced and who should **consume** it. The need to make such decisions arises because economic resources are **scarce**. Making decisions involves the **sacrifice** of benefits that could have been obtained from using resources in an alternative course of action. This sacrifice is known as the opportunity cost of an activity.

Economics as a social science

Economics studies the ways in which society decides what to produce, how to produce it, who to produce it for and how to **apportion** it. We are all economic agents, and economic activity is what we do to make a living.

Economists assume that people behave rationally at all times and always seek to improve their circumstances. This assumption leads to more specific **assumptions.**

- Producers will seek to maximise their profits.
- Consumers will seek to maximise the benefits (their 'utility') from their income.
- Governments will seek to maximise the welfare of their population.

Both the basic assumption of **rationality** and the more detailed assumptions may be challenged. In particular, we will look again later at the assumption that businesses always seek to maximise their profits. A further complication is that concepts such as utility and welfare are not only open to **interpretation**, but also that the interpretation will change over time.

The way in which the choices about resource allocation are made, the way value is measured, and the forms of ownership of economic wealth will also **vary** according to the type of economic system that exists in a society.

(a) In a centrally planned (or command) economy, the decisions and choices about resource allocation are made by the government. Monetary values are attached to resources and to goods and services, but it is the government that decides what resources should be used, how much should be paid for them, what goods should be made and, in turn, what their price should be. This approach is based on the theory that only the government can make fair and proper provision for all members of society.

(b) In a free market economy, the decisions and choices about resource allocation are left to market forces of supply and demand, and the workings of the price mechanism. This approach is based on the observable fact that it generates more wealth in total than the command approach.

(c) In a mixed economy the decisions and choices are made partly by free market forces of supply and demand, and partly by government decisions. Economic wealth is divided between the private sector and the public sector. This approach attempts to combine the efficiency of the market system with the centrally planned system's approach to fair and proper distribution.

In practice, the industrialised countries in the developed world have mixed economies, although with differing **proportions** of free market and centrally planned decision-making from one country to the next. In such economies, the government influences economic activity in a variety of ways and for a variety of purposes.

(a) Direct control over macroeconomic forces can be exercised through policy on tax, spending and interest rates.
(b) Taxes, subsidies and direct controls can affect the relative prices of goods and services.
(c) Government-owned institutions such as the National Health Mission (NHM) can provide goods and services directly, free or at low cost at the point of consumption.
(d) Regulation can be used to restrict or prevent the supply of goods and services.
(e) Incomes can be influenced through the tax and welfare systems.

Microeconomics is the study of individual economic units; these are called households and firms.

Macroeconomics is the study of the aggregated effects of the decisions of economic units. It looks at a complete national economy, or the international economic system as a whole.

1. What is economics?

2. What does the author mean when he uses the word assumptions?

3. According to the author what will change over time?

4. What kind of economic activity happens in a free market economy?

5. What kind of economy do developed nations have?

6. What are the different ways government can exercise control over economy?

7. List two major differences between free economy and centrally controlled economy.

8. What kind of economy does our country have?

WRITING

Writing definitions

In the above passage, look at the following lines:

Microeconomics is the study of individual economic units.

Macroeconomics is the study of the **<u>aggregated</u>** effects of the decisions

of economic units.

These are called as Definitions. Dictionary meaning is that it is the act of defining, or making something definite, distinct or clear. A formal definition consists of three parts:

1. The term (word or phrase) to be defined
2. The class of object or concept to which the term belongs
3. The unique characteristics that distinguish it from all others of its class

Examples:

1. A <u>license</u> is a <u>contractual arrangement</u> in which one firm (the licensor) <u>provides access to some of its patents, trademarks, or technology to another firm in exchange for a fee or royalty.</u>

   In the above definition, the word 'license' is the term being defined. The phrase 'contractual agreement' is the group it belongs to. And the last part of the sentence is its unique feature suitable to only license. This is a formal definition of 'license'.
2. **Plutocracy** is a government or state in which the wealthy class rules.
3. **Bipolar disorder** is a serious mental illness in which common emotions become intensely and often unpredictably magnified with mood swings.
4. **Experimental psychology** is a branch of psychology that uses experimental methods to study psychological issues.
5. A **Seismograph** is an instrument that measures and records details like force and duration of earthquake

Writing definitions

Write definitions for the following terms. Use dictionary for reference.

1. Algorithm
2. Bank
3. Reservoir rock
4. Poverty
5. Patriarchal society

Extended Definition

The above given definitions are single sentence definition. An extended definition, on the other hand, is a one or more paragraphs that attempt to explain a complex term. Especially, while writing reports, you may often discover that you need to explain certain basics before discussing the main subject matter. The key to writing a good extended definition is to choose the sources of definition to help readers understand the term being defined.

Checklist for writing extended definition for any terminology:

- Description
- Process narration
- Additional definition
- Historical background
- Cause and effects
- Problems and solutions
- Statistical data
- Uses & applications
- Similarities and differences
- Examples
- Future developments
- Advantages and disadvantages

Based on the checklist, try writing extended definition for the following:

- Aristocracy
- Psychokinesis
- Industrialization
- Migration
- Holocaust

Read the following passage and answer the following questions:

The historical reconstruction of the 1755 earthquake and tsunami in downtown Lisbon, Portugal

by **Angela Santos** [1,*],**Mariana Correia** [1],**Carlos Loureiro** [2],**Paulo Fernandes** [2,3] and**Nuno Marques da Costa** [1]

The 1 November 1755 earthquake triggered a tsunami that hit the entire Portuguese coastline. According to the historical records previously analyzed in Lisbon municipality, the combined effects of the earthquake, tsunami, and fire caused significant damage to the city's buildings. However, the administrative limits of Lisbon municipality have been changing over time, which has been one of the limitations in the interpretation of this historical event in the city. Still, it is known that the disaster killed more than 10,000 people in the municipality, which in 2010 had 54 civil parishes. Moreover, the 18th century census data show that before the earthquake Lisbon city had 109,754–157,192 residents (older than 7 years). As a result, the fatalities due to the 1755 disaster correspond to 6.4%–9.1% of the Lisbon city resident population. The recovery process started immediately after the disaster. Nevertheless, only on 12 May 1758 was the Reconstruction Law of Lisbon approved. It established a five-year period to conclude the reconstruction project. On the other hand, although the historical accounts are quite vast providing a general overview of the disaster in the Lisbon municipality, details remain unknown, especially in the downtown area. In addition, the 1755 event has been largely discussed among the public, stakeholders and scientific community; however, the authors did not find any published detailed analysis of the disaster in the Lisbon municipality.

Therefore, the aim of this research is to understand and reconstruct the impact of the 1755 event in downtown Lisbon, which includes earthquake, tsunami, and fire damage and the number of victims, as well as tsunami parameters (travel times, number of waves and inundation area). The study area is presented in **Figure 1**, corresponding to a stretch of coastline of about 1.8 km, including only 5 civil parishes (out of 54 administrative limits of Lisbon city in 2010). This area was selected due to available data and relevance to the comprehensive analysis of the tsunami. Furthermore, this research is a collaboration between academia and the Museum of Lisbon, which is quite

innovative in Portugal. With this research, the authors hope to contribute to a clearer and objective understanding of this historical event in downtown Lisbon and to advance the general knowledge about this historical event that has not been properly addressed or discussed.

Figure 1. Geographical setting of the study area: (**a**) Location of Portugal and the Lisbon municipality; (**b**) location of the study area; (**c**) details of the study area. which in 2010 had 5 civil parishes.

Answer the following questions:

1. Match the words in column A with their meanings in column B

Column A		Column B	
(1)	Parish	(a)	Death toll
(2)	Triggered	(b)	Interested party
(3)	Fatalities	(c) Significance	
(4)	Stakeholder	(d)	Community
(5)	Relevance	(e)	Activated

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2. Write single line definitions for the words taken from the passage.

   (a)   Tsunami
   (b)   Earthquake
   (c) Research project
   (d)   Historical event
   (e)   Census
3. According to the author, what is the aim of this research study?
4. What does the Figure 1 depict?
5. What was the event that forms the basis for this research?

6. Pair work:

   Earthquake and Tsunami are two natural disasters that have occurred on earth. There are similarities and differences between them. Discuss with your friend about both Tsunami and Earthquake. Use the clues given in the diagram and write a short paragraph comparing both these disasters.

   In your paragraph, use connectives like

To show similarity	To show differences
Similarly	Whereas
Likewise	On the other hand
In addition	However
In the same way	Unlike
Also	But, although
Both	Instead of, in contrast

Tsunami

Earthquake

Tectonic plates
Tidal waves
Destruction
Floods , Earthquake
Evacuation
Landslide
Volcano
Underwater
Indian tsunami

Tsunami, Epicentre,
Seismic, Environment,
Magnitude, Disaster,
Richter scale, Tremor,
Displacement,
Geological, Crack,
Energy, Rupture,
Aftershocks

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Writing Captions

Every picture need a suitable caption to describe what is in the picture. A good caption is essential for a picture. A picture without caption is like headless visual. It does not make any sense.

Houses damaged after an earthquake of magnitude 6.5 struck the coastal Bangkok

As given above, try writing caption for the following visuals:

Figure 1: _____

Figure 2: _____

Figure 3:

Figure 4: _____

Describing a picture

Read the following description of Figure 2 given above:

The above picture shows an aerial view of a devastated city which has been prey to a great flood. It shows the houses that are submerged in the water. The worried expression of the soldier, who views the effects of the flood, reveals the tragedy that has befallen the city. The city has been a beautiful place with houses interspersed with greenery that consisted of well grown trees and playgrounds. Further, the arrangement of the houses shows a well-planned and constructed city with spacious roads and streets. The picture shows just one electrical post, implying the loss of electricity and the city's loss of connectivity with the world.

The above paragraph describes the visual in detail and gives a coherent picture of what has happened. Descriptive writing uses powerful adjectives to show what is in the visual. It is very important to show not tell the readers what is in the visual. We need to use appropriate words to create that effect.

Now try describing the following picture using the earlier description as a model. Also, give a suitable caption to the picture. Your description should not exceed 150 words.

UNIT 3: NEGOTIATION STRATEGIES

Listening - Listening to interviews of specialists / Inventors in fields

(Subject specific)

Speaking – Brainstorming. (Mind mapping).

Small group discussions (Subject- Specific)

Reading – Longer Reading text.

Writing – Essay Writing (250 words)

Vocabulary: : Register specific - Incorporated into the LSRW tasks

LISTENING

Listening Skill is essential to become a fluent speaker in English. Strong listening skills need to be developed. It not only helps to understand what people say but also helps to speak clearly. Informational, critical and empathetic and comprehensive are the four main types of listening which help to face listening in various situations.

To attain perfection in Listening,

Be attentive
Understand the Ideas
Face the speaker and maintain eye contact.
Be attentive and relaxed.
Keep an open mind.
Listen to the words.
Don't interrupt
Don't impose suggestions
Wait for the speaker to pause.
Ask questions only to ensure understanding.
Try to feel what the speaker is feeling.
Give regular feedback.
Pay attention to nonverbal cues.

An Interview With Gandhi[1]

[*The interviewer was Charles Petrasch, who was in London while Gandhi was staying there. He was able to have a long*

interview with the Indian leader and to put to him a number of questions which he had prepared.]

My Indian friends and I had drawn up a list of questions which we wished to put to Gandhi before his departure from London, and we wrote down his replies as the interview went on.

The questions and answers which follow show exactly Gandhi's role in Indian politics.

The first questions put to the Mahatma were on general social matters.

In your opinion, what is the method by which the Indian princes, landowners, industrialists and bankers acquire their wealth?

At present by exploiting the masses.

Can these people enrich themselves without exploiting the Indian workers and peasants?

Up to a certain point, yes.

Have these people any social right to live better than the simple worker or peasant who performs the labour from which they draw their wealth?

Gandhi was silent for a moment. Then he replied: "No right. My social theory is that, although we are all born equal, that is to say, that we have a right to equal opportunities, nevertheless we have not all the same abilities. By the nature of things it is impossible that we should all be of an equal stature, that we should all have the same colour of skin, the same degree of intelligence and consequently it is natural that some of us should be more fitted than others to acquire material gain. Those who are

capable wish to acquire more, and they bend their abilities to this end. If they use their abilities in the best spirit they will be working to the benefit of the people. These people will be 'trustees' and nothing more.

"I should allow a man of intelligence to gain more and I should not hinder him from making use of his abilities. But the surplus of his gains ought to return to the people, just as the earnings of the children who work go to the common family fund. They are only the 'trustees' of their gains, and nothing else. I may be sadly disappointed in this, but that is the ideal which I uphold, and that is what is understood in the declaration of fundamental rights."

Would you demand a higher reward for intellectual work?

In an ideal state no one can demand a higher reward for his intelligence. He who acquires more ought to use it for social ends.

We asked Gandhi if he did not believe that one of the principal causes of the poverty of the Indian peasants and workers lay in the appropriation of the fruit of their labour by the landlords and capitalists, since only a minute portion of the profits of the latter class go to the Government.

Gandhi agreed.

Don't you think that the Indian peasants and workers are right in throwing themselves into a class struggle in order to secure their social and economic freedom and to rid themselves once and for all of the burden of supporting the parasite classes?

The Mahatma said no: "I myself am making the revolution for them without violence."

What would be your attitude in face of a revolution of the peasants and workers against the princes, landlords, capitalists and their ally, the British Government? And also,

what would be your attitude if such a revolution occurred in an independent India, in an India under a Protectorate, in an India with Dominion status, or in an India in no matter what kind of circumstances?

Gandhi replied quietly: "My attitude would be to convert the better-off classes into trustees of what they already possessed. That is to say, they would keep the money, but they would have to work for the benefit of the people who procured them their wealth. And for doing this they would receive a 'commission.'"

Activities:
1. What is Gandhiji's response to the question, "How do *Indian princes, landowners, industrialists and bankers acquire their wealth?*
2. Gandhi says, "My social theory is that all of us are born equa…..nevertheless we do not have the same abilities." How does he explain that idea or theory?
3. What is Gandhiji's idea of "revolution"?
4. Should people who do intellectual work get higher pay? What is Gandhiji's view on this.
5. What, according to Gandhiji, should the rich do with their wealth>

****

SPEAKING: BRAINSTORMING (MIND MAPPING)
Brainstorming:
Brainstorming is a process carried out to generate ideas within a group which is done in the initial stages of a project. It paves way to unleash many creative ideas in a non-judgemental environment. An effective brainstorming session will last anywhere between 15 and 45 minutes. An ideal time frame would be 30 minutes. The size of a group may vary from four to eight members. Instructions to be followed during brainstorming:
 1. Articulate the research topic clearly to the group members.
2. Encourage the generation of creative ideas.
3. Accept every idea discussed in the group.
 4. Do not abstain from any idea.
5. Do not criticize or evaluate ideas.
6. Try to build upon the ideas.
7. Record ideas accurately.
8. Evaluate the brainstorming session.

Mind Mapping:

Mind Mapping is one of the effective forms of Brainstorming. A mind map gives a visual representation to our ideas and concepts. This visual tool will 7 help us structure our ideas in an enhanced way. The visual representation of ideas will promote a better analysis, comprehension and synthesis of the ideas. The use of different words, images, colours to highlight or to differentiate the ideas will give a visual appeal to our thought. Mind Map can be created on a paper or digitally using different visual mapping softwares. There are many websites that help us construct mind map digitally.

Instructions to generate a Mind Map:
1. Write the research topic in the centre of a blank sheet.
2. Jot down the sub topics around the research topic.
3. Repeat the same process for generating the associated ideas to the subtopics.
4. Do not filter out ideas.
5. Keep the topics and ideas as short as possible.
6. Determine how the ideas are associated with the subtopics and how the subtopics are linked to the given research topic.
7. Identify the relationships between the ideas and between the subtopics and the research topic with lines or arrows.
8. Use of images and different colours will add effect to your mind map.
9. Reorganise the ideas using the identified relationships.

Here is a mind map about what it takes to be a good teacher

Source: https://www.flickr.com/photos/phploveme/4683410057
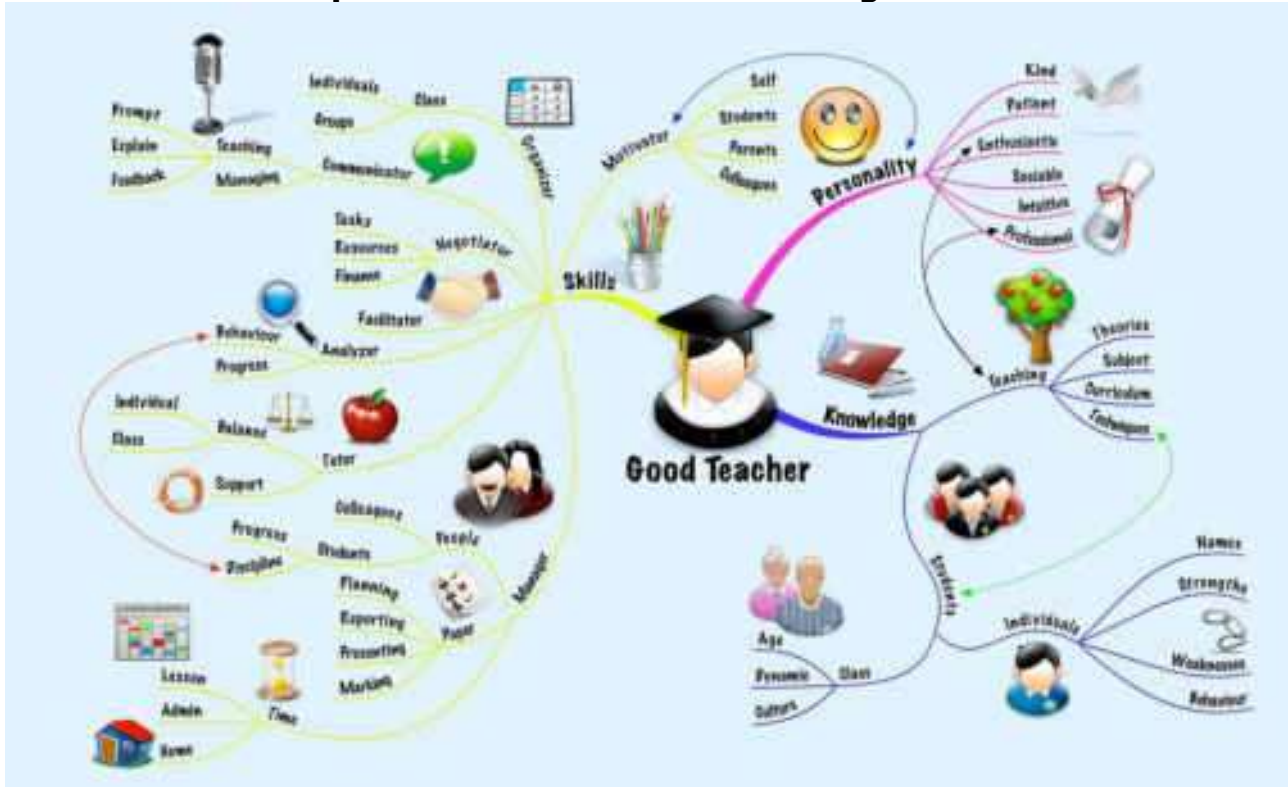
Task 1: Sketch mind maps for the following:

1. Social hierarchy
2. Personality types
3. Resolving the problems of farmers in India.

SMALL GROUP DISCUSSION:(3-4 memebers)

https://freesvg.org/group-wor

Source: https://freesvg.org/

As you know, the objective of this Unit 3 of your textbook is to achieve "Negotiation Strategies". When you discuss in a small group, you can brainstorm. Discussion in small groups is a great way to improve your speaking skills

Learning in small groups is beneficial because:

- It is a building block to help you gain confidence to speak in larger groups.
- You get feedback for your ideas
- You learn teamwork.

The following passage on Earth hour can form the basis for a small discussion:

Pretask
Find out the meanings of these words/expressions

Grassroots approach
Degradation
Catalyst
Legislative
Harnessing
Collective action
Redressed
Unprecedented
Concerted effort
Imminent

The idea of "Earth Hour" was generated in 2007 by WWF and partners as a symbolic lights-out event in Sydney in 2007. Today, Earth Hour is a movement which has spread all over the globe. Held every year on the last Saturday of March, Earth Hour engages millions of people in more than 180 countries and territories, switching off their lights to show support for our planet.

There is more to Earth hour than the symbolic switching off of lights. It is a grassroots approach to creating awareness about environmental degradation and has become a catalyst for change, having driven major legislative changes purely by harnessing the power of the people and collective action.

The Earth Hour movement is open to all who would be willing to lend their support to this cause. From its beginnings in 2007, the issues facing planet earth still need to be redressed - the climate crisis remains, made worse by another urgent threat: the rapid loss of biodiversity and nature.

Natural systems are vital for all our futures – and yet, the rate of global loss of

nature during the past 50 years is unprecedented in human history. Nature not only provides us food, water, clean air, and other services. It is also one of our strongest allies against climate change. The onus to protect nature lies on the human race. A concerted effort is required to avert the crises that is imminent through climate change. Earth Hour aims to spark global conversations on protecting nature not only to combat the climate crisis, but to ensure our own health, happiness, prosperity and even survival.

Task:

1. Having read the passage, get into small groups and discuss what activities can be a part of the "Earth Hour" campaign
2. Earth hour sensitizes us to our use of "energy" (Lights, fans etc) and how it is important to conserve energy. Discuss how each of us can be more careful in our use of energy on a daily basis.

READING COMPREHENSION
Source Passage 1:
Pre Task
Acquaint yourself with the meaning of these words before you read the passage:

Traditional
Hindrance
Authoritarian
Capitalism

Economic Systems

There are different types of economic system. These include: the traditional, the command/socialist economy, pure capitalism, and mixed economic systems.

- **The traditional economy.** This is the type of economy in which the organization of production and distribution is frequently governed by tribal rules or customs. This type existed mostly in the early stages of development where the economy is strongly linked to the social structure of the community and people perform economic tasks for non-economic reasons. In the traditional economy, economic matters are largely determined by social or religious customs and traditions. For example, women may plough

fields because that is their customary role and not because they are good at doing so. Traditional economic systems are often found in less developed countries, where they may be a hindrance to economic progress.

- **The command economy.** In the command economy, an authoritarian central government calls the tune. It operates on instruction from those in power. In this type of economy, decisions in connection with the functions of an economic system are taken on a collective or group basis. There is collective ownership of factors of production. The group that owns the factors of production and takes decisions may be some government body. A command economy is a centrally planned economy. There is typically very little freedom of choice. The occupation of workers, the quantities of which type of commodity to be produced, and the distribution of income are determined by the central planners plus making arrangements for future economic growth. Cuba, North Korea, Russia, and Iran are examples of economies that are closest to perfect command economies.

- **Pure capitalism.** Pure capitalism is an economic system based on private ownership and the freedom of individuals to conduct their economic affairs without interference from government bodies or other groups. Capitalist economic systems are characterized by a great deal of freedom of choice exercised by consumers and business firms in the market for commodities and resources. The capitalist economy is also known as the free exchange economy or market economy. The essence of pure capitalism is freedom. There is freedom to own property, freedom to buy and sell, and freedom from government interference in the economic

aspect of each individual's life. Capitalism is best characterized by the economy of the United States, even though it is not a purely capitalist economy.

- **Mixed economy.** Many economies are best described as mixtures of capitalistic and command systems. The United States and other countries where markets are heavily relied on to allocate resources and distribute output are known as mixed capitalistic systems. The characteristics of free enterprise system are manifested in most of its economic activities. However, some of its economic decisions of the mixed economy are taken on collective basis and some of the productive resources or goods are owned by a governmental body. In the mixed capitalistic economic system, both government and private decisions are important.

Task 1

1. Traditional economy is an ancient practice. How did it operate?

2. What is the disadvantage of a "command economy"?

3. What is the essence of "pure capitalism"?

4. What kind of economy do we have in India?

Reading Comprehension

Source Passage: 2

The Art of Loving

If we want to learn how to love we must proceed in the same way we have to proceed if we want to learn any other art…

The practice of any art has certain general requirements, quite regardless of whether we deal with the art of carpentry, medicine or the art of love. First of all, the practice of an art requires *discipline*. I shall never be good at anything if I do not do it in a disciplined way; anything I do only if "I am in the mood" may be a nice or amusing hobby, but I shall never become a master in that art. But

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the problem is not only that of discipline in the practice of that particular art, but it is that of discipline in one's whole life. One might think that nothing is easier to learn for modern man than discipline. Does he not spend eight hours a day in a most disciplined way at a job which is strictly routinized? The fact, however, is that modern man has exceedingly little self-discipline outside of the sphere of work. When he does not work, he wants to be lazy, to slouch or, to use a nicer word, to "relax". This very wish for laziness is largely a reaction against the routinization of life. Just because man is forced for eight hours a day to spend his energy for purposes not his own, in ways not his own, but prescribed for him by the rhythm of the work, he rebels and his rebelliousness takes the form of an infantile self-indulgence. In addition, in the battle against authoritarians he has become distrustful of all discipline, of that enforced by irrational authority, as well as of rational discipline imposed by himself. Without such discipline, however, life becomes shattered, chaotic, and lacks in concentration.

That *concentration* is a necessary condition for the mastery of an art is hardly necessary to prove. Anyone who ever tried to learn an art knows this. Yet, even more than self-discipline, concentration is rare in our culture. On the contrary, our culture leads to an unconcentrated and diffused mode of life, hardly paralleled anywhere else. You do many things at once; you read, listen to the radio, talk, smoke, eat, drink. You are the consumer with the open mouth, eager and ready to swallow everything—pictures, liquor, knowledge. This lack of concentration is clearly shown in our difficulty in being alone with ourselves.

A third factor is *patience*. Again, anyone who ever tried to master an art knows that patience is necessary if you want to achieve anything. If one is after quick results, one never learns an art. Yet, for modern man, patience is as difficult to practice as discipline and concentration. Our whole industrial system fosters exactly the opposite: quickness. All our machines are designed for quickness: the car and airplane bring us quickly to our destination -- and the quicker the better. The machine which can produce the same quantity in half the time is twice as good as the older and slower one. Of course, there are important economic reasons for this. But, as in so many other aspects, human values have become determined by economic values. What is good for machines must be good for man – so goes the logic. Modern man thinks he loses something – time – when he does not do things quickly; yet he does not know what to do with the time he gains -- except kill it.

Eventually, a condition of learning any art is a *supreme concern* with the mastery of the art. If the art is not something of supreme importance, the apprentice will never learn it. This condition is as necessary for the art of loving as for any other art. …

One more point must be made with regard to the general conditions of learning an art. One does not begin to learn an art directly, but indirectly, as it were. One must learn a great number of other – and often seemingly disconnected ---

things before one starts with the art itself. An apprentice in carpentry begins by learning how to plane wood; an apprentice in the art of piano playing begins by practicing scales; an apprentice in the Zen art of archery begins by doing breathing exercises. If one wants to become a master in any art, one's whole life must be devoted to it, or at least related to it….With regard to the art of loving, this means that anyone who aspires to become a master in this art must begin by *practicing discipline*, *concentration* and *patience* throughout every phase of his life.

From *The Art of Loving* by Erich Fromm, German Psychologist.

VOCABULARY AND COMPREHENSION TASKS

1. What does the psychoanalyst Eric Fromm mean by the word <u>discipline</u> in the line "*…the practice of an art requires <u>discipline</u>*"?
a. Distraction
b. Train (someone) to obey rules or a code of behavior
c. A branch of knowledge

2. Bring out the meaning of routinized used in the text.
a. Make something into a habit or routine
b. Prolong something
c. Annual

3. What does Eric Fromm mean by the word 'slouch'?
a. Slow walking
b. Active
c. To relax

4. Describe the meaning of 'rebelliousness'.
a. To agree
b. To protest or rebel
c. To laugh

5. In the reading passage what is the contextual meaning of 'infantile self-indulgence'?
a. Immature and childish behaviour
b. Childhood days
c. Mature person

6. Give the meaning of authoritarian

a. Autocrat or strict disciplinarian
b. Lazy person
c. One who authors a book

7. Give synonyms for chaotic
a. Pandemonium
b. Fixed
c. Orderly

8. Pick out the antonyms given in the passage. Two examples are done for you.
(i) Rational x Irrational
(ii) Connect x Disconnect
Find out the other antonyms from the given reading passage

9. What is the meaning of apprentice?
a. A trainee
b. A veteran
c. One who suffers from appendicitis

10. According to Eric Fromm what are the qualities necessary to practice any art?
a. Talent and opportunities
b. Concentration, patience and discipline
c. Riches

_____

ESSAY WRITING
Why learn the skill of writing an essay?
What do you do with information gained through a class lecture or by reading articles and books or browsing the internet? Do you verify its legitimacy? Do you dig in deep to confirm the data analysed and statistical 'facts' presented?
 We live in a time of misinformation where fake news travels fast through Whatsapp University and Facebook College. While information is power, misinformation is an utter disaster. It can ruin people's lives and career. Therefore it is our responsibility to learn how best information can be used to build lives and benefit the society.
Information, when properly utilized gets transformed into knowledge. The key to learning how to process information into knowledge can be learnt through the timeless art of essay writing. Who writes an essay in this age of digital communication you may ask. But the fact is, every scientific progress and development that ever existed was written as a research paper.
You may be brilliant in comprehending the world around you. Innovation can ooze from your very being. But, unless you learn how to present your thoughts

and creative ideas in the form of a well composed essay, all your brilliance may only be a former shadow that will soon disappear into the night. So buckle up. Let us journey through the process of converting information into knowledge through essay writing.

First things first

Before you begin to write your essay you need to ask yourself three questions: To whom am I writing? Why am I writing? What am I going to say? Bearing these questions in mind will keep your writing focused and avoid digressions.

Form and content

A well composed essay has a beginning, middle and an end or an introduction, the body of the essay and a conclusion. What you are going to say will be your core or the central idea. This should appear in the first paragraph which is the introductory paragraph. Why? This will set the purpose of your essay and will attract your reader. So you need to make this part as interesting and captivating as possible. The introductory paragraph sets the reader in anticipation for what is to follow. So make sure that you include the main points of discussion in this paragraph.

The rest of the composition will focus on expanding, explaining, arguing, comparing, contrasting, describing or substantiating your core idea through valid points that you had already mentioned in the introductory paragraph. To make things smooth for your readers, you will have to devote one paragraph for one idea. Depending on the word limit you may have the required number of paragraphs. Remember the golden rule of paragraph writing: One idea is equal to one paragraph.

Give leverage to your writing by adding quotations in order to substantiate your statements. Provide examples, facts, quotations and any other form of proof that can validate a stronger emphasis to your ideas. Leave your emotions bottled up for the time being and focus on how you may evolve objectivity in your writing. Then you can sprinkle the flourish of your emotions in subtle places to add the element of pathos wherever appropriate. This will connect your essay with your readers.

Read and reread your essay and check if the cohesive devices are put to good use. Check for coherence within each paragraph, i.e. check if each paragraph explains one idea. If your essay looks like a seed slowly grown into a tree then it is good to go. If you feel it looks like a flower garden trampled upon and all over the place then you would have to go over your ideas to see how you have developed them. Reinforce and summarize your arguments at the end of every paragraph in one sentence so that it will provide that connectivity and seamless flow of thoughts. Edit your essay and proofread it to avoid gaining negative popularity among your critics.

Now that you have journeyed your readers through the body of the essay you need to gently let them dock. Otherwise you have lost the readers in an ocean of ideas not knowing where it all leads to. Compose a conclusion that will enable your reader to retrace your ideas and connect it to the core idea with which your journey began. You need to gently lead them on to the shore where they will relish memories of a pleasant journey with you. At the end of this

endeavour you would have gained the skill to transform information into knowledge. This is the learning outcome of the essay writing process.

STRONGER TOGETHER AND A NEW WORD FOR US: SOLIDARITY

- Srishti Bhatia, Modern Public School, Delhi

   Topper, UNESCO Pan India Online Essay Contest 2020
   https://en.unesco.org/sites/default/files/week_2_winners.pdf

"When I is replaced by We, even Illness becomes Wellness."   - Malcolm

Solidarity is a commonly used word but has today gained a real recognition, meaning, and significance as the globe has endorsed 'solidarity' as the foremost and vital weapon in the battle to safeguard humanity. This has been brought to our conscience through a message given by Dr. Tedros Adhanom, the Director-General of WHO, who has made 'solidarity' a constant message of the global public health response to COVID-19 pandemic.

Solidarity is not only a word, but also a realization that we are all in this together; not a feeling of indefinite compassion, but a firm and persevering determination to commit oneself to the common good, to strengthen the community and to promote a just society.

It is clear that strength lies in unity, and 'Unity is Strength'. Our unified objectives, sympathies, and actions tie us together as one with the strings of solidarity, while striking the chords of unity, cooperation, and unanimity.

The world is tussling with an issue of large scale and massive human impact, the pandemic of COVID-19. Antonio Guterres, the ninth Secretary-General of the United Nations also said, in an interview, "COVID-19 is above all a human crisis with severe health and socio-economic consequences." This virus is unexpected in our lifetime and requires an unmatched response. Once the battle is over, there will be ample time to look back and completely understand how it emerged, evolved, and caused devastation in our entity. That time has not come yet. Now is the time when the globe is in the thick of health, and when the international community must unite in its common struggle with solidarity to combat this virus and its shattering consequences.

The WHO is working in solidarity with many countries to implement a comprehensive approach to educate, empower, and engage communities to slow down transmission.

It is securing lives and buying time for the development of vaccines and treatments. An international large-scale study is in place to generate reliable data to show which treatments are the most effective. The WHO has called it 'Solidarity Trial.'

Although political borders have been closed, scientists are creating a global collaboration unlike any other in history. Several experts in so many nations are focusing simultaneously on a single topic with great urgency.

Another example is the lockdown followed by the respectable citizens like faithful teammates following the instructions of the government with loyalty. In turn, all doctors, healthcare workers, and civil workers have been fearless warriors working persistently round the clock for the good of the world.

The globe is worth fighting for to secure such an invaluable jewel: humankind. We are in the midst of unpleasant circumstances of the most serious kind. We

have before us long months of struggle. It is the necessity to move forward with the spirit of harmony to fight this terrible catalog of human sufferings. 'Let us stand in solidarity, not to a specific country, race, or religion but rather to humanity.'

<div align="center">

"United we stand, divided we fall."

</div>

The little poetess inside me wants to sum up my thoughts with the following piece of poetry:

<div align="center">

Alone we are droplets, together an ocean,

when we drink unity's potion.

Alone we are bricks, together a building,

and so ourselves we are shielding.

Alone we are branches, together a tree,

grown with the seeds of solidarity.

Alone we are people, together a team,

with cooperation supreme.

Alone we are humans, together humanity

standing together with unity and unanimity.

</div>

OBSERVATIONS:

- ✓ The sample essay has a catchy Title with focus on "Solidarity" which will be dealt with throughout the essay.
- ✓ The Introductory paragraph foregrounds the agenda of this essay.
- ✓ Quoting the Director-General and Secretary-General of WHO adds great significance to the authenticity of the argument which the writer puts forth.
- ✓ Ideas are put forth cohesively in paragraphs, as one idea in one paragraph.
- ✓ The writer ends the essay with a clarion call to humanity towards "solidarity". Until the end of the essay the focus was maintained and clarity and cohesion upheld.

TASKS:

- Following the tips we learnt now, write a simple essay on "Your experience under Covid-19 Lockdown"
- Out of all essays you have read so far in life, which essay has touched you the most? Write 5 reasons on how and why the essay appealed to you. Through this, let the writer in you learn how to write a good essay which would inspire people.

UNIT 4: PRESENTATION SKILLS

Listening - Listening to lectures.

Speaking –Short talks

Reading – Reading Comprehension passages

Writing - Writing Recommendations

       Interpreting Visuals inputs

Vocabulary: Register specific -Incorporated into the LSRW tasks

Listening: Listening to lectures.

Read the transcript of APJ Kalam's speech and answer the questions given below.:

APJ Abdul Kalam's speech at IIT Madras 2010

Friends, before I begin my address I want to share a thought with all the youth present here. I have met, so far, 11 million youth like you in a decade's time, in India and abroad. I have seen their hopes, experienced their pains, walked with their aspirations and heard through their despair. All this experience made me learn something about them, which I would like to share with you:

I learnt, every youth wants to be unique, that is, YOU! But the world all around you, is doing its best, day and night, to make you just "everybody else". Being like everybody else is convenient at the first glance, but not satisfying in the long vision.

The challenge, therefore, my young friends, is that you have to fight the hardest battle, which any human being can ever imagine to fight; and never stop fighting until you arrive at your destined place, that is, a UNIQUE YOU! Being unique will require excellence, let us understand what is excellence in more detail.

Excellence is a self-imposed self-directed life-long process. Excellence is not by accident. It is a process, where an individual, organization or nation, continuously strives to better oneself. The performance standards are set by themselves, they work on their dreams with focus and are prepared to take calculated risks and do not get deterred by failures as they move towards their dreams. Then they step up their dreams as they tend to reach the original targets. They strive to work to their potential, in the process, they increase their performance thereby multiplying further their potential and this is an unending life cycle phenomenon. They are not in competition with anyone else, but themselves.

In this context, I will talk to you about four important aspects in life with my experiences. Aim in life, Acquiring Knowledge, Working Hard towards your

dream even in the times of difficulty and then finally how to manage failures and success in life.

1) What does the author mean when he says I have seen their hopes…. Heard through their despair?
2) What does the author mean by "UNIQUE YOU"?
3) What does the world around you wants you to be according to the passage?
4) How according to the author APJ Abdul Kalam, the pursuit of excellence achieved?
5) What is the "unending life cycle phenomena", that the author is referring to?

_____

_____

Further references: https://speakola.com/motivate/apj-abdul-kalam-iit-madras-2010

SPEAKING:

SHORT TALKS

The following is a transcript of a short talk on 'Poverty and the Need to Alleviate It'

Poverty is a world over concern. Even the developed countries are wrestling with this problem. As the socialists would like to call it, poverty is not an issue of non-availability but an issue of sharing existing resources with all. As a wise man once said there are enough resources in the world for every one's need, but not for every one's greed. Therefore, socialists would call this a problem of distribution of income and wealth.

   On the other hand, capitalists would call it a matter of reward for the efforts put in. The more a person strives the more he gets and the less his effort the less will be his share and therefore less his income and wealth.

However, most welfare economies have come to the conclusion, which is shared by all in the modern times, that, irrespective of the source of the problem, there is a need to alleviate it. Poverty today is defined as lack of access to good health care (particularly important in these days of pandemic), good education, clean air and living conditions minimum wages etc. In fact, nations today agree that poverty is not non-availability food, clothing and shelter alone: it is much more than that.

Therefore, governments the world over have started targeted programs whereby specific groups of people are aided to reach the minimum standards required in the nation or even pass on the skills to have an opportunity to break out of the vicious cycle of poverty.

All said and done it is an unpleasant reality, which is morally uncomfortable to live with and economically and politically an avoidable evil. Governments agree that something needs to be done and right away and in a focused manner to alleviate this malady.

Task 1

Having listened to the short talk on poverty, answer the following questions:

1. Comment on the statement, "There are enough resources in the world for everyone's need, but not for everyone's greed"
2. Does the speaker sympathise with capitalists?
3. How does a welfare economy define poverty and respond to it?

READING

PASSAGE 1:

Institutions

For any individual or group to survive it is important that certain human functions are kept in mind, like the function of controlling the process of reproduction. For the society to exist it's important that the members of this society itself keep supplying societal members with a nurturing environment. And this is possible only through reproduction. And these reproduced

members exist as a part of the institution of the family which again is a part of the larger institution which is the society. Other functions include law and order because these are what guide the families to live in an orderlyfashion.

To make sure that the members of the family and society can support their and their family's financial requirements, the economic institution is created. This depends on the education of the person for which education is supplied through the <u>educational</u> <u>institution</u>. In this way, many institutions exist with the aim of providing the specific details required to live.

Meaning of Institutions

Institutions are established ways of doing things. It refers to those rules and regulations which in their abstractness focus on the practicality of them by maintaining social interaction and regulated behaviour pattern. It involves discipline and curbing human emotions and behaviour. Recognized usage and procedures are known as institutions of Sociology. These established rules help create unity among the members which takes the institution forward.

There are norms set for and by every society. Even though these norms differ from society to society, the members of a particular society stick to their norms. Only then can the institution prosper. If each one will focus only on themselves then the essence of the institution will be lost and there could be chaos. Say the parents need steady support without which they cannot look after their children because the institution of a family does not teach one that it is their responsibility to look after their children.

It is a natural drive and instinct. This is what makes the generation and institution forward else it might collapse. Everyone had to understand their role, reversal of which may alter the

peace of the society and it's members ingeneral.

Because of the presence of organized ways of livelihood, there's not much competition else many people would have found difficult to survive. In a way, society is helped by the institutions in order to function and are the pillars of society. Without one the other cannot function properly. It is a combined supplication so they are interdependent.

If the economic condition is good, automatically a good family can be established. Similarly for a good family to live in a good way, financial strength is necessary. How well the family will run, depends on how educated its members are. Thus the concept of Institution is important to study many social sciences. Every person might have their ownidea of aninstitution.

Characteristics of Institutions

A cluster of social usage: A cultural system exists and all follow the same cultural practices andtraditions.

The relative degree of permanence: The beliefs are laid out and tried and tested over time. If they sustain then they become the fundamental beliefs of the institution and gain a permanentrecognition.

Well-known defined Objectives: The Objectives resonate with the cultural norms. It is kept in mind that the people are made to understand the difference between the Objectives and thefunctions.

Cultural Objects of UtilitarianValue.

Institutions are Transmitters of Social Heritage.

They are resistant to social changes due to the rigidity ofbeliefs.

Functions of Institutions

- They simplify the actions and work of the individual.

- They provide a means to control society and people who constitute it.

- Every individual is assigned a role depending on which he can achieve and regulate his status.

- They help to maintain the order in society.

- They act as stimulants by giving the required freedom.

- Create harmony and unity amongst the members of society.

Reading Activity

- Topic: Social Institutions

- Read the given passage and explain how social institutions work?

- Write in your own words about any of the social institutions you come across.

- Identify the characteristics of social institutions

PASSAGE 2:

M N Srinivas

Mysore Narasimhachar Srinivas was born in 1916 in Mysore. He was one of the best Indian sociologists. He received many honours for his contribution to the field of sociology. His studies are prominent in the area of caste and its other classifications, Sanskritization and many other topics that revolve around caste itself. He acquired his knowledge and doctorate in sociology in the University of Bombay. In the late forties, Srinivas went to the University of Oxford for his further studies. There he played a significant role and started bringing up ideas for sociology………
In brief the topics which were of great importance to Srinivas were:

Sanskritization is as the process in Hinduism in which the low caste Hindu person or group tries to acquire values, ideologies, and rituals of higher caste Hindu.

Westernization applies to Indian culture undergoing change on account of Indian people borrowing the culture of the West.

Secularization in India is a process in which all the religion existing in India will be treated as equal and neutral. These are some of the social changes which Srinivas emphasized on.

Religion and caste: He emphasized on many topics related to religion and village. How religion plays an important role to formulate Indian society. Religion, therefore, carries caste system which again produces subdivision of these castes. He later discusses how these castes affect different caste groups differently. Each caste carries its position in society and treated on the basis of those ranks. He further talks about how these caste differences bring out more differences among people differences like occupational differences, a hierarchy in society, the system of pure and impure, caste panchayats and assemblies.

Dominant caste: according to Srinivas any caste that has three main powers of numerical strength, political power, and economic power is said to be a dominant caste. Now he arises a new concept of dominant caste it does not talks about how castes are ranked in society. If only concerns with if one has numerical strength, political power and economic power irrespective of whether he belongs to low or high caste.

ANSWER THE FOLOWING QUESTIONS:

1. What is 'Sanskritization'?
2. Explain the connection between religion and caste?
3. What is meant by 'Dominant Caste'?

EXERCISE :

Oral presentation on the ideologies of M.N.Srinivas

WRITING

WRITING RECOMMENDATIONS

Recommendations are guidelines to be followed in formal occasions. A company or an organisation uses recommendations in order to increase work perfomance and efficiency. Recommendations or guidelines issued in advance by any organisation also ensures that nothing untoward happens in a workplace.

Recommendations are normally made by committees chosen for that purpose. These committees analyse in depth the problem at hand and offer workable solutions. They also read literature on similar problems and gather data before offering guidelines. Since a lot of thought goes into writing recommendations, strong words are often used. You will come across words such as "must", "should", "ought" and phrases such as "it is recommended", "strictly adhered to" etc in recommendations. Recommendations are normally written as short statements and they are written using bullet points.

For most formal occasions we are required to follow a set of guidelines in order to ensure a peaceful and hassle-free experience. Recommendations are a milder form of instructions.

While recommendations give us suggestions, instructions are imperative. Recommendations suggest that it would be really nice if we can follow instructions whereas instructions are mandatory. They must be followed.

How to write a Recommendation:

1. Recommendations are usually written in passive voice.
2. The statement begins with the object in focus.
3. It usually follows one of the following sentence patterns
   a. Object+shouldbe+verb (participle)
   b. Object+mustbe+verb (participle)
   c. Object+canbe+verb (participle)

d. Object+need to be+verb (participle)

e. Object+ought to be+verb (participle)

Sample Recommendations:

1. Recommendations to be followed by the Public while visiting a Museum:

•Visitors must not touch works of art

•Visitors ought to keep a safe distance from the work of art

•Silence must be maintained while inside the museum

•Visitors must use only pencil for taking notes as an accidental pencil mark on art can be removed.

•Visitors must not lean on objects and artefacts kept on display.

•Visitors must strictly avoid bringing food, drink or chewing gum inside art galleries.

•Visitors can wear coats but cannot carry it with them for the sake of the safety of the art.

•Visitors are strictly prohibited from carrying any kind of weapons.

•Running, pushing and rough behaviour is not allowed inside the premises.

•Visitors may take photograghs or videos of art works for their personal use only.

Recommendations for visiting a National Park or Reserved Forest:

•Visitors must always listen to the instructions of the guide as he knows the forest better.

•Visitors must not approach animals too closely or try to distract them.

•It is recommended that visitors carry back their litter with them.

•Visitors should strictly avoid carrying plastic bottles or covers with them.

•Visitors cannot go off the designated trial or path.

•Visitors should resist the temptation to take selfies with animals. Their privacy must be respected.

•Visitors should avoid bringing small children, babies and pets to the National Park.

•Use of alcohol and smoking is strictly prohibited as this is a reserved forest.

•Visitors should not use cellphones.

•It is recommended that visitors wear comfortable walking shoes and travel light.

• Wildlife photography is permitted in the premises. It is advisable to carry one camera per family.

•Visitors must take the permission of local tribes before taking pictures with them.

Writing Tasks:

1.   Write Recommendations for visiting a World Heritage Site.

2.   Write recommendations for visiting a Shopping Mall in the midst of the Covid 19 pandemic.

3.   Write recommendations for kindergarten children's safety in school as well as in commuting to school and back.

INTERPRETING VISUALS

TASK 1

Take a close look at the map given below and answer the following questions

Global Literacy Rates
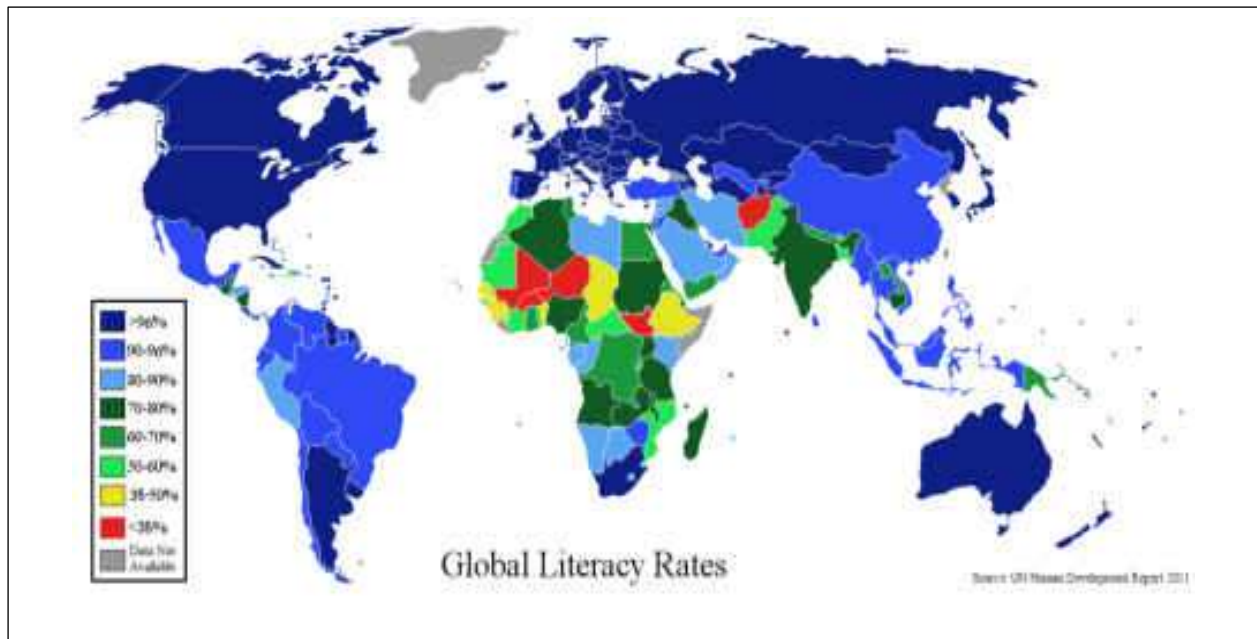
1. Which continent has the lowest literacy rates?
2. Where do you find the highest literacy?
3. Which continent has 100% literacy?
4. What does the map say about literacy in India?
5. Comment on literacy in South America

TASK 2

1. What does the picture represent? Write a paragraph on the issue represented.

UNIT 5: CRITICAL THINKING SKILLS

Listening - Listening comprehension- Listening for information.

Speaking – Making presentations (with PPT- practice)

Reading – Comprehension passages – Note making.

Comprehension: Motivational article on Professional Competence,

Professional Ethics and Life Skills.

Writing – Problem and Solution essay- Creative writing- Summary writing

Vocabulary: Register specific - Incorporated into the LSRW tasks

LISTENING	Listening to live, audio lectures to understand meaning, syntax and information Source passage: • Intelligence
SPEAKING	Source passage • Power point slideshow in classrooms
READING	Source passage • Space Exploration - Voyagers 1 and 2 • Self medication • professional competence, professional ethics and life skills •
WRITING	Source passage • Global warming • Floating Away by Jamie Holweger

LISTENING: LISTENING FOR INFORMATION

Aim

To enable learners to gain subject related vocabulary and use it in context

Pre-Task:

New Words or Concepts introduced / Vocabulary Enrichment

Intelligence
Quantitative thinking
Behaviour
Adaptability

Ask preliminary questions to draw the attention of the students

The following is a transcript of a passage on 'Intelligence'

Definitions of Intelligence

In popular understanding, intelligence means mental abilities enabling one to think rationally, learn readily, act purposefully, and deal effectively with one's environment. In psychological testing, it is a term that has been given many different technical meanings concerned with mental abilities such as verbal reasoning, quantitative thinking, abstract analysis, manipulation of geometric shapes, recognition of similarities and differences between pictured objects. Intelligence also implies "intellect" as

Capacity : Capacity or power of the mind for thinking and knowing in contrast to those mental faculties by which the individual feels or wills.

Figurative :   Figurative references to individuals with marked capabilities for thought, or to thinking powers, in general.

According to the Dictionary of Psychology, 'Intelligence' refers to the ability to function effectively with problems, whereas 'intellect' refers to the rational thought functions of the human mind.

Intelligence as ability to adjust: According to one group of psychologists, intelligence is the general mental adaptability to new problems and new situations of life. Some definitions that come under this group are as follows. Binet (1905): —Intelligence is the ability of an individual to direct his behaviour towards a goal‖. William James (1907):

—It is the ability to adjust oneself successfully to a relatively new situation‗. J. Piaget (1926):

—Intelligence is an adaptation to physical and social environment‖. F. N. Freeman (1937);

—Intelligence is represented in behaviour by the capacity of the individual to adjust himself to new situations to solve new problems, to learn.

Intelligence as ability to Learn: This group of definitions of Intelligence stresses the ability to learn. The more intelligent the

person, the more readily and extensively he is able to learn and enlarge his field of activity and experience. Buckingham (1921)—Intelligence is the learning ability. Superman (1927) —Intelligence may be thought of in terms of two abilities i.e. _g_ or general ability and _s_ or _specific ability_. Thurstone (1946) defines _intelligence in terms of five primary abilities i.e. _S_ or Space factor, _N_ or Number factor, _V_ or Verbal Comprehension factor, _W_ or Word Fluency factor and _M_ or memory factor._

Intelligence as the ability to do abstract reasoning:

This group of definitions maintains that intelligence is the ability to carry on abstract thinking. This implies the effective use of ideas and efficiency in dealing with symbols, specially numerical and verbal symbols. L. M. Terman (1921): —An individual is intelligent in proportion as he is able to carry on abstract thinking. P. E. Vernon (1927): —Intelligence is an allround thinking capacity or mental deficiency. E. L. Thorndike (1931): — define intelligence in general as the power of good responses from the point of view of truth or fact. Henry Garret (1946):

—Intelligence is the ability demanded in the solution of problems which require the comprehension and use of symbols i.e. words, numbers diagrams, equations, formula.

Theories of Intelligence

Apart from defining "intelligence", psychologists have been concerned to know the structure of intelligence. They have made analyses in an effort to determine its underlying factors. The purpose of these analyses has been to discover if possible the elements or components of intelligence, not only for a better theoretical understanding of this complex process but also to learn what might be the implications for the design and construction of mental tests.

Theories of Multiple Intelligences

Gardner's theory – intelligence is best thought of as multiple abilities that come in packages. The multiple intelligence theory is that people possess eight types of intelligence: linguistic, logical, spatial, musical, motor ability, interpersonal, intrapersonal and naturalistic intelligence. The eight kinds of intelligence Gardner described are:

- Visual-spatial intelligence.
- Verbal-linguistic intelligence.
- Bodily-kinesthetic intelligence.
- Logical-mathematical intelligence.
- Interpersonal intelligence.
- Musical intelligence.
- Intrapersonal intelligence.
- Naturalistic intelligence

In Psychology, there are two types of intelligence, as identified by American psychologists Raymond Cattell and John Horn: fluid intelligence and crystallized intelligence. Their theory holds that an

individual's overall intelligence is a result of different skills and abilities mixing and interacting together.

TASK 1

State whether True or False

1.Intellect is not figurative

2. It is the ability to adjust oneself successfully to a relatively new situation.

3. L. M. Terman (1921) gave the definition, An individual is intelligent in proportion as he is able to carry on abstract thinking

4. Intelligence is not represented in behaviour by the capacity of the individual to adjust himself to new situations to solve new problems, to learn.

TASK 2

Match the following:

An individual is intelligent in proportion as he is able to carry on abstract thinking.	E. Vernon (1927)
Intelligence is an all round thinking capacity or mental deficiency.	E. L. Thorndike (1931)
Intelligence in general is the power of good responses from the point of view of truth or fact	Garret (1946)

TASK 3

Answer in one or two sentences the following terms:

1.Intelligence

2. Qualitative thinking.

3. Intellect as Capacity and Figurative

4. Gardener's eight kinds of intelligence

SPEAKING

Pre-Task: New Words and Concepts.

Powerpoint
Electronic media
Slide
Slideshow
Audiovisual
Animation
Data

POWERPOINT SLIDESHOW IN CLASSROOMS

Power point presentations came into the education scenario more than a decade ago. One of the cardinal principles of effective communication is the use of audio visual aids. In times past, charts and models were used to capture the attention of listeners. With the advent of electronic media and advance in computer programming and computer literacy, classrooms and lecture halls are equipped with facilities for power point presentations. Pictures, videos, music, graphs can be included on the slides as required. For instance, heart beat can be depicted with an animated image of a heart. Video clips of events and phenomenon can also be inserted onto a powerpoint slide. PPTs can be created with voice over by recording narration for each of the slides. The running of the PPTs can also be set by recording a slideshow with rehearsal timings. With audio recordings working in sync with the slides (pictures, videos, graphs, data and text) powerpoints prove to make an indelible impact on listeners.

POWER POINT – DOS AND DON'TS

1. Do not put up too much of text matter on the slide. Only the point and not a whole paragraph

2. Do not read what is on the slide. The slide is only a memory trigger. You should use it only to remind you/guide you as to the course of your speech

3. For a professional or academic presentation do not have designs or make it too colorful

4. Use pie charts and graphs when discussing any quantitative analysis

5. Use photographs or pictures when necessary. There is a saying, "A picture says a thousand words" Photos and pictures speak volumes.

6. Don't use visuals that distract the audience from the topic and avoid flashy transitions.

7. The presentation should be progressive.

8. Don't use multiple fonts and stick to a readable font style and size

9. When you complete your presentation, do a recap of all thepoints you have made in your power point

TASK 1

Choose which of the following in the list should in included in a good Power Point presentation and which should be not. Write P for present, N for not present

Big, readable text	Progressive presentation	Excessively colourful	Consistent	Clarity
Too many fonts	Elaborate slide templates	Jarring images	Colors which are contrasting	The 6x7 rule
Differences	Bullet points	Flashy	Too detailed	Visuals which

which distract		transitions		distract
Extra animation	Maximum three to four slides per	Precision	Simplicity	Too many styles
Numbers for lists with sequences	Variety of sound effects	Huge font size	Visuals to support	Differences which imply importance

TASK 2

Say whether the following statements are true or false, giving reasons.

1. Using only uppercase letters in the slides is a good idea.

2. Sans seriff is a clear font.

3. Size implies importance.

4. Sound effects can be distracting.

5. One must follow the KISS principle.

TASK 3

Arrange them in correct order, keeping the factor of maximum importance first

Planning	
Using visuals to enhance the presentation	
Selecting proper channel/ Mode of presentation	

Starting with a bang	
Summarizing	
Preparation	
Knowing your audience	
Follow up- Having room for questions	
Setting the Environment	
Watching the body language, making it impressive	
Following the KISS principle	

TASK 4

Create a PPT following the above rules and make a presentation in class. Share the interesting moments and challenges faced while creating a PPT.

READING

READING COMPREHENSION & NOTE MAKING

NOTE TAKING AND NOTE MAKING

Have you ever wondered how to clarify notes from class, connect ideas together, and revise for exam in an easy way? Then try this important study skill – **NOTE TAKING AND NOTE MAKING.** Do 'Note Taking' and 'Note Making' mean the same? Or, Is there any difference between them?

Note-taking is a process that involves writing or recording what you hear or read in a descriptive way. This is often the first stage of the process of

producing effective notes. **Note-making** is an advanced process that involves reviewing, synthesizing, connecting ideas from the lecture or reading and presenting the information in a readable, creative way that will stick in your mind.

You listen to lecture or read a book and take notes. **Taking** notes can be bit elaborate. **Making** notes is different as they are the resources you create yourself. They tend to be more concise.

Why Note Taking / Note Making is important?
The importance lies in the fact that it -
- ➢ Promotes active listening / reading
- ➢ Provides a framework for revision
- ➢ Improves understanding

Note-taking and making are skills and, like all skills, can be mastered through practice. How you take and make notes will depend on the subject, context and the way you work best. You will need to reflect on your skills as you progress.

The 5 R's of Note Taking / Note Making

Record: During the lecture, write all meaningful information legibly.

Reduce: After the lecture, write a summary of the ideas and facts using key words as cue words.

Recite: Recite all the information in your own words without looking at our notes or the text.

Reflect: Think about your own opinions and ideas. Raise questions and record original ideas

Review: Before reading new material, take 10 minutes to review your older notes. Skim over the main ideas and details.

Pauk, W. (1989). How to Study in College (4th Ed.). Boston, MA: Houghton Mifflin.

What format of Note Taking / Note Making suits you best?
This may depend on your learning preference. Are you best visually? Auditorily? Kinaesthetically? A mixture of more than one? Have a think about the easiest way for you to produce and review your notes. The structure of the lecture should help you to organise the content, so it is important to work on that as well.
Whatever format you decide on (and it might be different for different lectures) the general principles are the same:
- ➢ Use your **own** words.
- ➢ Be concise.
- ➢ Use abbreviations, phrases and key words, not sentences.
- ➢ Date and reference notes clearly.
- ➢ Number pages and points.
- ➢ Use headings and subheadings.
- ➢ List details.
- ➢ Use boxes, underlining, colour coding, CAPITALS and highlighting.
- ➢ Use arrows to show links between sections.

- Use diagrams and drawings.
- Leave a margin and plenty of space between sections.
- Use a well-spaced layout.

Formats for Notes
1. Outline Method or Linear notes
This is the simplest and therefore the most common style of **notes**, both for reading and listening. The word **linear** is the adjective of the word line, which indicates that these **notes** are written down the page, one line after the other.
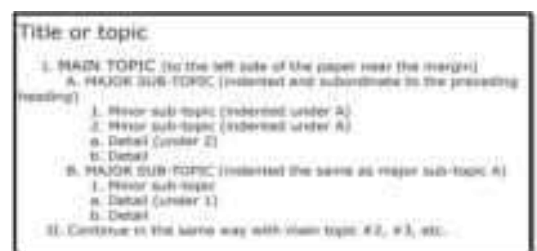
2. Cornell Method
The Cornell notes is a notes taking system that was invented back in 1950s by Walter Pauk. The Cornell notes taking method ensures to divide a single page in three sections namely Main idea, Notes, and Summary Section.
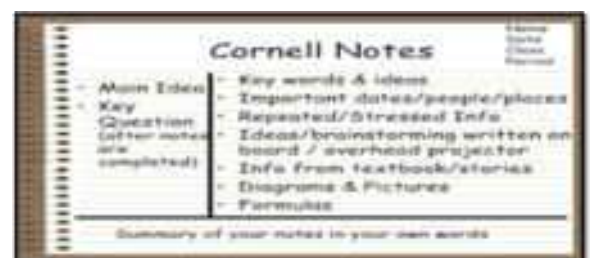
3. Mind Maps
This is a pictorial way of organizing your thoughts and ideas. The visual nature of the notes can make it easier to understand and remember information. You can use colour, diagrams, pictures, and symbols.
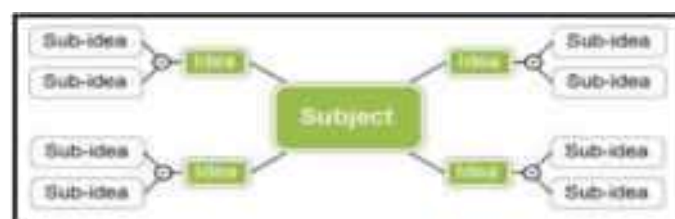
4. Sketch notes Method

Sketchnotes (sketch + notes) are visual notes, so more than just the regular text notes we all are used to take. When sketchnoting you enhance your regular notes with visual elements such as small drawings, frames, arrows, letterings etc**.**

https://www.verbaltovisual.com/what-is-sketchnoting/
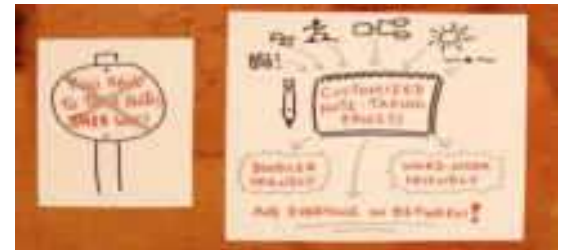
5. Annotation Method

Annotation is an important part of note-taking. You annotate printed materials by marking up the text - writing in the margins, highlighting text, etc. Annotating is useful when you want to identify key passages so you can find them quickly later.

https://in.pinterest.com/pin/358880664055306524/

Read the passages carefully and take notes from it, keeping in mind the heading and the subordinate points. The first one is worked out for you.

- Occasional self medication has always been part of normal living. The making and selling of drugs has a long history and is closely linked, like medical practice itself, with belief in magic. Only during the last hundred years or so has the development of scientific techniques made diagnosis possible. The doctor is now able to follow up the correct diagnosis of many illnesses-with specific treatment of their cause. In many other illnesses of which the causes remain unknown, he is still limited, like the unqualified prescriber, to the treatment of symptoms. The doctor is trained to decide when to treat symptoms only and when to attack the cause. This is the essential difference between medical prescribing and self-medication

> **Self Medication and Medical Prescription**
> a) Occasional self medication practiced in past
> b) Medical diagnosis recent-100 yrs. approx.
> c) Difference between a prescribed medicine and self medication
> 　　　I. Doc. trained –knows when to treat symptoms & when to treat cause.
> 　　　II. Indiv. doing self medication ignorant abt. above.

2. Who knew that chimpanzees love to dance? They also like to clap along to music, and nod their head, tap their feet and move in time with the rhythm. A new study shows that chimpanzees could appreciate music. The researchers are from Kyoto University in Japan. They say their study could help us understand how early humans developed an interest in music. Researchers Dr Yuko Hattori and professor Masaki Tomonaga conducted tests on seven chimps. They played the apes six two-minute songs on a piano for six days. The researchers said the chimps had a definite sense of rhythm and it changed their mood. The male chimpanzees seemed to respond to the melodies more than the females. The researchers wrote that chimpanzees could have passed on a liking for music and dance to early humans millions of years ago. This could have happened via a common ancestor around six million years ago. The researchers said the study suggested that our love of dancing was deep inside the earliest humans. Dr Hattori said: "Chimpanzees dance to some extent in the same way as humans." She added: "In humans, listening to music causes rhythmic movement, suggesting a close connection between the auditory and motor areas in the brain." She believes the research could shed light on the evolution of dancing in humans and why we love melody and rhythm so much.

READING PASSAGE 2

PROFESSIONAL COMPETENCE, PROFESSIONAL ETHICS AND LIFE SKILLS

Youth is a period of life that has been described as "salad days": this is a Shakespearean expression meaning a youthful time, accompanied by the vibrancy, enthusiasm, idealism, innocence and freshness to absorb new ideas and experiment. This colourful phase of life with its alacrity makes young people proactive and resourceful. It is also the time to equip oneself to face the vagaries of life and career. The scope of professional competence, professional ethics and life skills bring in a perfect blend of IQ(Intelligence quotient),

EQ(Emotional quotient) and SQ(Social and Spiritual Quotient). These important parameters of life are the beacon light which will light up the lives of youth right from their childhood to youth hood to adulthood. Hence is important for educational stakeholders like parents and teachers to inculcate ethics and life skills into the curriculum.

Finding your métier

Life is full of hills and valleys and it is indeed an uphill task to discover yourself so that you get into the perfect profession or occupation based on your passion, talent and merit. The famous quote of philosopher Socrates, " To know thyself is the beginning of wisdom", is the essential fulcrum on which our personality revolves. In psychology, the Johari window opens itself to know aspects of oneself known and unknown to ourselves and to others. As American transcendalist writer Ralph Waldo Emerson writes in his essay 'Self- Reliance', "Trust thyself: every heart vibrates to that iron string", so the most essential and foremost step in finding your métier is to discover yourself, trust yourself, know your strengths and weaknesses. As philosopher Rene Descartes says, "I think, therefore I am" (Cogito Ergo Sum).

This thinking and discovering yourself will lead you to discover your passion towards the subjects that you study and the profession that you pursue.

Finding your mentor

In the challenging society that we live in, and with the statistical data pointing at the danger of many youth committing suicide or facing depression, it is a good proposition to have a mentor who can be your friend, philosopher and guide". As the English poet, John Donne puts it, "no man is an island". So in this web of relationships, it is important for students to have role model mentors in the form of parents, teachers or even friends. This will boost your confidence when you feel low and you can strive to be a blessing to others. Abraham Lincoln attributed his greatness to his parents; so also Thomas Alva Edison. Dr. S. Radhakrishnan, the philosopher- President of India and Dr. A.P.J. Abdul Kalam acknowledged the role played by their elders and teachers in shaping their personality. What is true of mentoring for Lincoln, Edison, Dr. Radhakrishnan or Dr. Abdul Kalam is true for us also. Friendships based on shared interests and intellectual companionship is stimulating intellectually, emotionally, socially and spiritually.

Habits and Routine

In the words of Sean Covey, an American business executive, "depending on what they are, our habits will either make us or break us. We become what we repeatedly do". It has been proved that anything we do continuously for twenty one days, becomes a habit. Our personality is basically an amalgamation of our habits. To quote John Irving, "good habits are worth being fanatical about." Sigmund Freud's psychoanalytic personality theory speaks of id, ego and super ego which gives the character traits of a person. Super ego tries to perfect and civilize our behavior based on moral right or wrong. Ego deals with the reality, trying to meet the desires of the 'id' in a way that is socially acceptable in the world. So the values like punctuality to your class and exams, honesty and integrity, loyalty to your subjects and educational institution and nation, faithfulness to your duty as a student, determination to be 'high on task and

high on people', tolerance to fellow human beings and God's creations, generosity- all can be etched in your ego and super ego right from your student days to your professional years and even in your societal and family life.

Tenacity

The value of tenacity or perseverance, even in the face of adversity or failure is an important life skill to possess. This determination to achieve success against all odds is important. Not everything will work according to our liking. But the tenacity to hold on, to persevere, and not to be defeated is important. The best example is the character of Santiago in Ernest Heming way's novel The Old Man and the Sea, where,in spite of his hardships syas, "Man can only be killed, but not defeated." History is replete with examples of rulers trying to achieve their goal. We need to keep in mind that achieving our goal with tenacity is good provided we achieve it through honest and meritorious methods.

Professional Ethics

Professional ethics is a term widely used in the academic and professional circles. The word ethics comes from the Greek word ethos and means moral philosophy.

In academics, knowledge devoid of ethics leads to plagiarism in your assignments, paper presentation, and publication of your research paper or dissertation. It is unethical to copy is an examination or copy someone' else's ideas or words verbatim without acknowledging the source. Honesty and humility are the hallmarks of professional ethics. The principles which Mahatma Gandhi enunciated in his book my experiments with truth, is worthy enough to be emulated in our life.

Professional ethics also includes a balanced life-oriented and contemporary relevant pedagogy. The methodology of the teaching-learning process should be learner-centred and gender balanced. Rote learning and examination oriented education is out of the purview of professional ethics. The ultimate aim of professional ethics is academic integrity and holistic development of the body, mind and spirit. A student moulded thus will indeed carry this integrity in his/her career and will be a part of his/her personality.

Learning- a life-long companion

Learning is a never ending joy and the thrill of learning something new is a fascinating journey and a life-long process. It is often said that once a student, you are always a student. For learning to be pleasurable, a thirst for knowledge coupled with its connection to the real and practical life is vital. Life experiences add colour and vibrancy to our life and every subject that is there in the curriculum is a learning curve.

Nature is a great teacher. The great English romantic poet William Wordsworth brings out the pantheism where nature brings aching joys and dizzy raptures or John Keats who said," a thing of beauty is a joy for ever". The philosophical content in Thirukkural infuses us with enlightment and practical wisdom. Every subject discipline - Economics, Political Science, Literature, Philosophy, Sociology, History, Anthropology, Social Work- is fraught with great treasures to make you a disciplined, holistic person. Literature makes you see life in totality through the various characters in novels, short stories, poems, biographies etc. history and anthropology gives us a continuum about the past.

Economics teachers us the beginning and evolution of economy. Political Science deals with the nuances of governance. Sociology and social work gives us insights about philanthropy and advocacy on social issues.

An interesting aspect of enjoying your learning process is the bonus of giving you freedom to choose your hobby or areas of specialization, through the various subjects that you study. A student could take up hobbies like travelling, visiting museums, historical or tourist places, numismatics philately, reading, theatre activities or street theatre to spread social awareness or volunteering in social service projects associating with various NGO's. all the hobbies, co-curricular and extra-curricular activities makes learning a holistic life-long process, outside the walls of the classroom.

Task

1. How do you plan to make the best use of your undergraduate course?
2. What do you plan to do after your undergraduate programme?
3. Do you have any passion/hobby related to your subject area?

WRITING

PROBLEM SOLUTION ESSAY

We analyze the question by thinking about three things: keywords micro-keywords action words. Keywords are the words that tell us what the general topic is. Micro-keywords identify which part of the general topic the examiner wants you to talk about. They often give an opinion, qualify the statement or talk about a sub-category of the bigger general topic. Action words tell us what the examiner wants us to do.

SOURCE PASSAGE I

Global warming is one of the biggest threats humans face in the 21st Century and sea levels are continuing to rise at alarming rates.

What problems are associated with this? Cite some possible solutions.

If we look at this question we can see that the keywords are 'global warming'. This is our general topic. We are going to write about this, but we cannot write about any problems associated with global warming. If we do this, we have not answered the question properly. We therefore need to look at the micro-keywords.

The micro-keywords are 'humans' and 'sea level rise'. So instead of writing just about the huge topic of global warming and any problems associated with that (such as increased storms, extinction of certain animals, erosion of soil) , we have to talk about how particularly sea level rises will affect humans. If for example, we talked about the problems affecting the 'planet' or 'animals' or the 'atmosphere', we would not be answering the question.

The action words are problems and solutions. Our task is therefore to write about that and only that. It does not ask our opinion or about the disadvantages and advantages or about the causes, just the problems and solutions. If we talked about the causes of sea level rise, then we would not be answering the question.

There are several problems and solutions including:

Problem: flooding of people's homes and businesses - Solution: build flood barriers or move to higher areas

Problem: loss of agricultural land and starvation - Solution: switch to more suitable crops

Problem: displacement of millions of people - Solution: move people in a planned and orderly way before the floods

Problem: ground water undrinkable - Solution: build desalination plants

Paragraph 1- Introduction, Paragraph 2- Problems, Paragraph 3- Solutions, Paragraph 4- Conclusion

Climate change is among the principal dangers facing people this century and ocean levels are increasing dramatically. This essay will first suggest that the biggest problem caused by this phenomenon is the flooding of homes and then submit building flood protection as the most viable solution.

The foremost problem caused by sea levels creeping up is the flooding of peoples' residences. Millions of people all over the world live in coastal areas and if the sea rises by even a few feet, they will be inundated with water and lose their property. Shelter is one of the most basic of human needs and widespread flooding would cause millions of people to become homeless, not to mention losing all of their possessions. The devastation brought about by this was clear for all to see during the 2011 Tsunami in Japan, in which millions of people were displaced.

A possible solution to this problem would be to build flood barriers. Flood defences, such as dikes, dams and floodgates could be built along coasts and waterways, thereby stopping the water reaching populated areas. The Netherlands is one of the most populated areas in the world and also one of the

most vulnerable to flooding and they have successfully employed various flood defence systems.

To conclude, stemming the rising tides caused by increasing global temperatures is one of the foremost challenges we face and it will ultimately lead to many of the worlds' cities being left underwater, but a possible solution could be to utilise the flood prevention techniques already used by countries like Holland. It is predicted that more and more countries will be forced to take such measures to avoid a watery catastrophe.

TASK 1

Work in pairs and attempt to find solutions for the following problem:

Nowadays many people have access to computers on a wide basis and a large number of children play computer games. What are the negative impacts of playing computer games and what can be done to minimize the bad effects?

TASK 2

 List the problems in the current education system and try to give creative solutions as students of the contemporary generation.

CREATIVE WRITING

Creative writing is writing that allows you to express your thoughts and emotions in a purely personal way. This style of writing is usually imaginative and unique to particular writer.

Some points to remember while attempting a creative writing

1. Be original.

2. Use powerful words and suggestive phrases that give a clear image.

3. Use adjectives and adverbials.

4. Use of unusual and expressive combination of words.

5. The language's grammatical rules and use of tenses can be altered.

SOURCE PASSAGE II

Henry Mince"s eyes popped open as his father, Theodore, shouted for him to get out of bed. Henry sat up, groggy, dreaming it was morning and his mother had just come in to wake him. He opened his eyes, looked around the room and realized yes, he had been dreaming. She always had woken him softly and slowly, not with a shout, like his dad. He crept out of bed, his feet cold against the wood floor. He came out of his room just in time for his father to say a quick goodbye before he was out the door for work, leaving Henry to fend to himself until supper time. Henry shuffled around the house, getting ready for the day. He walked to the bathroom for his morning shower, his feet creaking on the floorboards, the only noise in the house. He finished up in the bathroom, brushing his hair and teeth, and made way for the kitchen to have some breakfast. He was still so sleepy; he could almost close his eyes remembering when the house would be filled with the aroma of bacon on the skillet. He walked in to the room, his mouth instantly beginning to salivate with the fond memory, only to open his eyes to an empty room. No bacon, no parents, just cold, hard cereal in a ceramic bowl for Henry this morning. After breakfast, Henry wandered around the house, bored to death. He passed by his fathers" room and saw with contempt that the bed remained unmade. In fact, upon a second

glace, Henry saw that the entire house was in need of a good cleaning. Towels lined the bathroom floor, dishes piled up in the kitchen sink, and all sorts of crummies scattered along the wood floors of the entire house. I have got to get out of here…, Henry thought to himself. He shivered; the mere thought of being alone in there all day was beginning to make him antsy. I think I'll head down to the park, he decided. And with the swift decision, Henry grabbed his backpack containing his wallet as well as other various items and set off from the house. Henry practically sprinted to the park and was there in no time. He looked around seeing clear blue sky, white fluffy clouds and just the slightest breeze to cool the skin. In fact, it was so beautiful that Henry was not the only person to come there that day. Several people were strewn about playing Frisbee, having picnics and just enjoying themselves. As Henry walked toward his favorite bench, he noticed a vendor near the water's edge selling balloons. That's just what I need today, Henry thought to himself. He quickly calculated the money he had with him and walked toward the vendor, wondering if he would have enough to buy a balloon.

TASK 3

Identify and underline the descriptive words from the above passage. Use your creativity to continue the story and give an interesting end.

SUMMARY WRITING.

A summary is a shortened version of a letter, a passage, a report, an article, a chapter or a book, written in the summarizer's own words. Summarizing includes reading, understanding, analyzing, selecting important points and using note-making skills and rewriting.

POINTS TO REMEMBER

- Write the summary in your own words, making sure that you have covered all the main points of the original.

- Do not add any detail or comment not found in the original.

- The summary should have the same tone as the original, and it should not reflect the author's attitude towards the subject.

- Make use of connectives for coherence.

- The language of the précis should be free from slang and colloquial expression. Avoid using idiomatic phrases or fixed expressions.

READ, IMAGINE, CREATE
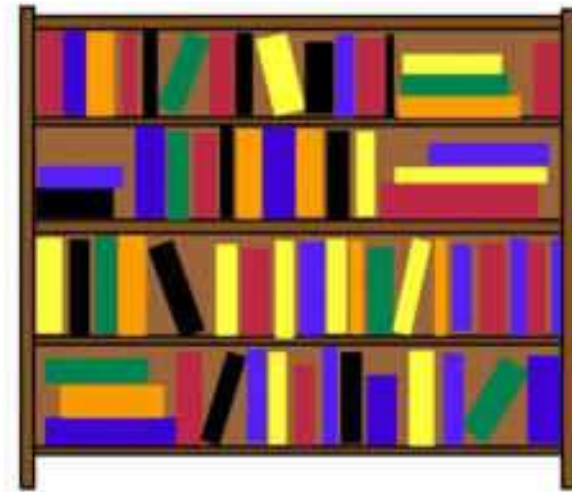
The following books and channels are recommended for you to widen and expand your learning experience:

Books:

1. Jawaharlal Nehru - *Glimpses of World History*
2. Erich Segal – *Love Story*
3. Khushwant Singh – *Train to Pakistan*
4. Khalil Gibran – *The Prophet*

Short Stories

Authors Recommended: Leo Tolstoy, Guy De Maupassant, Somerset Maugham, O'Henry

Channels

The History Channel

Rick Steves (Travel videos on YouTube. The videos have subtitles)

PROFESSIONAL ENGLISH FOR B.SC. PHYSICAL SCIENCES

UNIT - I- COMMUNICATION

LISTENING

❖ **Aim**: Learning new concepts, new words, expressing and sharing further information, foreign words, the meaning words, and contextual usage of the underlying scientific terms. Learners will develop their skills in comparing, contrasting, skimming, and scanning, predicting will be activated as they are necessary for learning

Pre-Task: New Words or Concepts introduced / Vocabulary Enhancement

Given below are some of the key words that you will come across in the texts in the Unit. Talk to your partner and sort out their meanings. Your teacher will then check the meanings with the class as a whole.

Raman Effect	Spectroscopy
scattering	Raman scanner
crystal structure	Diffraction
Substances	Ultrasonic
Molecules	Hypersonic frequency
Optics	Infra-red
Acoustics	Crystal dynamics
Optics of colloids	Iridescent substances
Electrical and magnetic anisotropy	Physiology of human vision
Radiation effect	Vibrations

Water has no colour, then why does the sea look blue?

SOURCE PASSAGE 1 : The Indian Scientist who found why the sea is blue?

A glass of water has no colour. But a deep sea with the same water is a brilliant blue. Why is this so? This was the question that CV Raman asked himself in 1921 on seeing the colour of the Mediterranean Sea from a ship. He immediately began to conduct experiments on board the ship using some simple instruments he had with him. At that time, scientists believed the sea was blue because it reflected the colour of the sky, but Raman found that it was the water itself that caused blue light to scatter more than other colours in light.

Raman returned from his visit to England and Europe and started experiments to study how light behaved when it passed through various substances. On February 28, 1928, one of the experiments gave a clear result. Light of only one colour was

passed through a liquid, but the light that emerged had small traces of another colour. This meant that the molecules in the liquid were changing the colour of some of the light passing through it. The discovery created a sensation around the world and was named the Raman Effect. In 1930, CV Raman became the first person from Asia to be awarded a Nobel prize in any field of science. The date of the discovery, February 28, is now celebrated as National Science Day in India. The Raman Effect has been very useful in many areas of science. It was found that when light was passed through a substance, a series of colours were seen that could be thought of as anger print of the substance. This idea has been used in chemistry, medicine, biology and many other areas of science. It is called Raman Spectroscopy.

Recently, people have used the idea to make a device called Raman Scanner. It can be pointed at a substance to tell what it is. Police have begun to use this scanner to find out if people are carrying banned substances. Simply brilliant, Raman was a man of extraordinary ability. He passed his tenth standard when he was just 11 years old. At 15 he had a degree, with gold medals in Physics and English. By the time he was 19 he had an MA. Professors at college used to allow him to skip science classes because they knew he didn't need them. In addition to being brilliant, Raman was also intensely curious about the world around him. We saw how his curiosity about the colour of the sea led to the discovery of the Raman Effect. Similarly, his curiosity led to a wide range of scientific work. On his 1921 trip to England he was taken to St. Paul's Cathedral. Raman became so excited by the whispering gallery there that he performed some experiments and wrote scientific papers about it. As a child, Raman had seen his father play the violin. Much of his life's research work was about the science behind music. He also investigated the effect of sound on light and the structure of crystals. His collection of crystals is preserved at the Raman Research Institute in Bangalore.

Chandrasekhara Venkata Raman was born at Tiruchirappalli in Southern India on November 7th, 1888. His father was a lecturer in mathematics and physics and so from a very young age Raman was was immersed in an academic atmosphere. He joined Presidency College, Madras, in 1902, and in 1904 passed his B.A. examination, winning the rest place and the gold medal in physics; in 1907 he completed his graduation with a distinction. His earliest research was in optics and acoustics – the two ends of investigation to which he dedicated his entire career – were carried out while he was a student. At that time a scientific career did not appear to present the best possibilities, CV Raman joined the Indian Finance Department in 1907; though the duties of his office took most of his time, Raman found opportunities for carrying on experimental research in the laboratory of the Indian Association for the Cultivation of Science at Calcutta (of which he became Honorary Secretary in 1919).

In 1917 he was offered the newly endowed Palit Chair of Physics at Calcutta University, and decided to accept it. After 15 years at Calcutta he became Professor at the Indian Institute of Science at Bangalore (1933-1948), and in 1948 he was made the Director of the Raman Institute of Research at Bangalore, established by him. He also founded the Indian Journal of Physics in 1926, of which he was the Editor.

Raman sponsored the establishment of the Indian Academy of Sciences and served as its first President since its inception. He also initiated the Proceedings of that academy, in which much of his work has been published. He was also the President of the Current Science Association, Bangalore, which publishes Current Science (India). Some of Raman's early memoirs appeared as Bulletins of the Indian Association for the Cultivation of Science (Bull. 6 and 11, dealing with the

"Maintenance of Vibrations"; Bull. 15, 1918, dealing with the theory of the musical instruments of the violin family). He contributed an article on the theory of musical instruments to the 8th Volume of the Handbuch der Physik, 1928.

In 1922 he published his work on the "MolecularDiffraction of Light", the first of a series of investigations with his collaborators which ultimately led to his discovery, on the 28th of February, 1928, of the radiation effect which bears his name, the Raman effect ("A new radiation", Indian J. Phys., 2 (1928) 387), and which got him the Nobel Prize in Physics in 1930. Other investigations carried out by CV Raman were: his experimental and theoretical studies on the diffraction of light by acoustic waves of ultrasonic and hypersonic frequencies (published 1934-1942), and those on the effects produced by X-rays on infrared vibrations in crystals exposed to ordinary light.

In 1948 Raman, through studied the spectroscopic behaviour of crystal. His laboratory was dealing with the structure and properties of diamond, the structure and optical behaviour of numerous iridescent substances (labradorite, pearly felspar, agate, opal, and pearls). Among his other interests were the optics of colloids, electrical and magnetic anisotropy, and the physiology of human vision. Raman was honoured with a large number of honorary doctorates and memberships of scientific societies. He was elected a Fellow of the Royal Society early in his career (1924), and was knighted in 1929. Sir Chandrasekhara Venkata Raman – died on November 21, 1970.

Resource: https://www.myindiamyglory.com/2018/07/12/raman-effect-how-indian-scientist-cv-raman-discovered-why-sea-is-blue/

TASK 1: Listen to the audio and answer the given questions
.
Classify the following terms as devices, concepts or processes in the table

Raman Effect, Scattering, Crystal Structure, Acoustics, Optics of colloids, Prism, Diffraction

Device	Process	Concept

TASK 2: Listen and give specific informationon the terms given :

1Spectroscopy
2Raman effect
3Raman scanner
      4.Diffraction
5.Ultrasonic
6.Hypersonic frequency
7.Infra-red
       8.Crystal dynamics
       9.Iridescent substances
      10.Diffraction

Crystal Dynamics -   a frequency above the human ear's audibility limit
Hypersonic   -   the vibrational movement of atoms in the solid state
Ultrasonic   -   Speed of more than 5 Mach
Optics   -   concerned with the properties of sound.
Acoustics   -   studies the behaviour and properties of light

Task 4:Fill in the blanks with suitable words from the choices given in the bracket

(Prism, Matter, Radiation, Light, Interaction)

Spectroscopy - is the study of the ------ between ------ and electromagnetic ------via   electron **spectroscopy**,   atomic **spectroscopy**.
Historically, **spectroscopy** originated through the study of visible ----- dispersed according to its wavelength, by a -------.

SPEAKING

Source Passage 1: Tipu Sultan – The Original Rocket Man of India

Pre-Task: Learning New Words and Concepts.

Weaponise : adapted for use asa Weapon	**Biographer:** a person who writes an account of someone'slife
Incorporate: to include something within something else	**Craftsmen:** a person who is skilled in craft
Nozzle : a cylindrical spoutat the end of a pipe	**Armoury** : a place where weapons arekept
Deployed : to move intoposition for military action	**Bursting** : break open orapart suddenly and violently
Disarray : a stateof Disorganization	
Aerospace :operating aircraft/spacecraft	**Paranoia** : a thought processwhich is influenced by anxiety

Introduction

Mysore rockets developed and deployed by Tipu's army during the Anglo-Mysore wars, were one of the first weaponised metal rockets. The British had heavy losses because of these rockets. Not only did these rockets play a huge role in the Anglo-Mysore wars, they also helped in the defeat of Napoleon in the battle of Waterloo. Rockets developed by the British based on Tipu's designs even find a mention in American national anthem – the Star SpangledBanner.

History

Following the invention of gun powder, the Chinese and Europeans had tested rockets using bamboo tubes. As they lacked the range and stability required for long-range weapons, they were soon replaced by cannons. However, in late the 1700s Tipu experimented by replacing bamboo tubes with iron tubes, because bamboo was a weaker material, the amount of gun powder loaded in the tubes waslimited. With the iron tubes, the Mysore army could load more gun powder in the rockets, providing them with more speed and additional range. Tipu's rockets boasted of ranges of upto 2km, because of the introduction of high qualityiron.

Tipu's designs also incorporated swords in the rockets, which served a dual purpose

The rockets had a scientific design as well. The metal tubes filled with gun powder were closed on one end, and on the other end a nozzle was provided to propel the rocket using the gases emitted. Tipu's designs also incorporated swords in the rockets, which served a dual purpose. The swords acted as a guidance mechanism, providing the rocket with stability during the flight, and towards the end of the flight, the swords became a weapon. The rockets used to tumble after losing thrust as it came down towards its target, killing or severely injuring the soldiers who came under it.

Tipu created a designated force to operate the rockets, which was as much as 5,000-men strong.

Use in Battles

Tipu Sultan's forces used rockets with great effect in the four Anglo-Mysore wars. One of the first mentions of the effective use of metal rockets was during the battle of Pollilur during the first Anglo- Mysore war in 1780. The advancing British East India company forces were repelled by the Mysore army using several rounds of rocket fire. Several officers of the British army were taken prisoners following this defeat.

Tipu Sultan confronts his British enemies during the siege of Srirangapattanam

The records of the third Anglo-Mysore war also mention rockets units being deployed by Tipu Sultan. During the war, Lt Col Knox, a British officer, and his troops came under heavy rocket fire while they were advancing towards the Cauvery River Banks, near Srirangapatana, on 6 February1792.

Battle of Sultanpet Tope

In the battle of Sultanpet Tope, during the fourth Anglo-Mysore war, Arthur Wellesley, who later became Duke of Wellington and hero   of the battle of Waterloo, was ordered to conduct a night raid on the fort in April 1799. The troops moving under the cover of darkness came under heavy rocket fire. Soldiers of the unit and Wellesley,who had not faced rockets before, were shocked and left in disarray. Wellesley, in particular, was humiliated after losing control of his troops.

Influence on History

RottamNarasimha, aerospace scientist and   professor, engineering mechanics unit of Jawaharlal Nehru Centre for Advanced Scientific Research, who studied Tipu's rockets and their history, said that the humiliation suffered in Sultanpet changed Wellesley as a military commander. "According to his biographer, he never showed fear again on the battlefield. Wellesley then went to become the commander who defeated Napoleon in the battle of Waterloo. Thus, Mysore rockets influenced the great battle of Waterloo," he said.

A soldier of Tipu Sultan's army, using his rocket as a flag staff

"Even though rockets were used in other parts of the world, Tipu was able to take rocket technology to the next level. India produced one of the best quality irons in the world at that time and Tipu had highly skilled craftsmen at his disposal. Using these two, he made bigger rockets with longer ranges," saidNarasimha.

The rockets seized from Tipu's armoury resulted in the development of Congreve rocket, which were used in Anglo-American Wars. They even find a mention in the US National Anthem, the Star- S p a n g l e d Banner: "…the rockets' red glare, the bombs bursting in air. According to aerospace scientist Narasimha, the contribution of Tipu towards rocket technology will remain unquestioned. He will remain theoriginal rocket man ofIndia**.**

TASK 1 :Speaking Activity

1.   Read the passage and describe the two key contributions of Tipu Sultan to India and England. Justify why you consider them as the key contributions. Work in pairs.

2.   Discuss in groups and Comment on the Rocket design and craftsmanship of Tipu Sultan, in comparison with the rocket designs that are being used in the present-day context.

3.   Suggest two different metals that can beused to increase the efficiency of rocket technology.

4.   Describe the "original rocket man" in comparison with the "missile-man of India".

5.	On what principle does rocket-science work?

While reading the passage, you might have noticed that some of the statements are **facts** (which are accurate and proven), whereas some statements are **opinions** (which show the writer's views or attitudes). Opinions may differ from person to person. It is very important to recognize facts and opinions in academic reading and listening for better understanding of a topic.

Read the following statements and say whether they are facts or opinions. Write F against facts and O against opinions.

a)	Tipu's rockets boasted of ranges of upto 2km, because of the introduction of high qualityiron.
b)	Tipu Sultan is India's original Techinnovator
c)	Tipu established trading houses for Mysore productsworldwide
d)	According to aerospace scientist Narasimha, the contribution of Tipu towards rocket technology will remain unquestioned. He will remain the original rocket man ofIndia.

Historians and researchers, on the other hand, regard the Tiger of Mysore as a secular, progressive king who was constantly on the lookout for the best global technology. Records suggest that he developed industries, laid the foundation of the silk trade, and encouraged foreign technology. What is your opinion about Tipu's Technical expertise? Give two reasons to support your answer. Try to use the following expressions while speaking

- 		I think………..…………………………………………………
- 		Ibelieve………………………………………………………….
- 		It seems to methat…………………………………………...
- 		In my opinion………………………………………………………
- 		I am convincedthat……………………………………………..
- 		I feel absolutely certainthat…………………………………..

Non-nutritive : not providing proper nourishment **Substitutes** : a person or thing acting or serving in place of another **Oxidation** : Oxidation is a processin which a chemical substance changes because of the addition of oxygen **Compensate** : give (someone) something, typically money, in recognition of loss, suffering, or injury incurred	**Aspartame**: a very sweet substance used as an artificial sweetener, chiefly in low- calorie products **Shelflife** :the length of timefor which an item remains usable, fit for consumption, or saleable. **Spoilage** : the action or process of spoiling, especially the deterioration of food and other perishable goods.

Introduction

Saccharin derives its name from the word "saccharine", meaning "sugary". Sodium **saccharin** (benzoic sulfimide) is a non-nutritive or artificial sweetener with effectively no food energy. It is commonly used as sugar substitute because it doesn't contain calories or carbs. It is about $300-400$ times as sweet as regular sugar, hence need only small amount to get a sweet taste but has a bitter or metallic after taste, especially at high concentrations. Saccharin is used to sweeten products such as drinks, candies, cookies, andmedicines.

History

Saccharin was discovered by the chemists Ira Remsen and ConstantinFahlberg in 1879, while they were investigating the oxidation of *o*- toluenesulfonamide. Fahlberg noticed an unaccountable sweet taste to his food and found that this sweetness was present on his hands and arms, despite his having washed thoroughly after leaving the laboratory. Checking over his laboratory apparatus by taste tests, Fahlberg was led to thediscovery of the source of this sweetness-saccharin. Saccharin became the first commercially available artificial sweetener. It is still made by the oxidation of *o*-toluenesulfonamide, as well as from phthalic anhydride.

Fahlberg and Remsen published articles on benzoic sulfimide in 1879 and 1880. In 1884, then working on his own in New York City, Fahlberg applied

for patents in several countries, describing methods of producing this substance that he named saccharin. Two years later, he began production of the substance in a factory in a suburb of Magdeburg in Germany. Fahlberg would soon grow wealthy, while Remsen merely grew irritated, believing he deserved credit for substances produced in his laboratory. On the matter, Remsen commented, "Fahlberg is a scoundrel. It nauseatesmetohearmynamementionedinthesamebreathwithhim."

Uses

It has no caloric value and does not promote tooth decay. It is not metabolized by the body and is excreted unchanged. Saccharin is widely used in the diets of diabetics and others who must avoid sugar intake. It is also extensively employed in diet soft drinks and other low-calorie foods, and it is useful in foods and pharmaceuticals in which the presence of sugar might lead to spoilage. It does not react chemically with other food ingredients; as such, it stores well. Blends of saccharin with other sweeteners are often used to compensate for each sweetener's weaknesses and faults. A 10:1 cyclamate-saccharin blend is common in countries where both these sweeteners are legal; in this blend, each sweetener masks the other's off taste. Saccharin is often used with aspartame in diet carbonatedsoft drinks, so some sweetness remains should the fountain syrup be stored beyond aspartame's relatively short shelf life. In its acid form, saccharin is not water-soluble. The form used as an artificial sweetener is usually its sodiumsalt. The calcium salt is also sometimes used, especially by people restricting their dietary sodiumintake.

Side effects

People with sulfonamide allergies can experience allergic reactions to saccharin, as it is a sulfonamide derivative and can cross-react. Saccharin in toothpaste can cause burning sensations, swelling, and rashes of the mouth and lips in sensitive individuals.

The current status of saccharin is that it is allowed in most countries, and countries such as Canada have lifted their previous ban of it as a food additive. The claims that it is associated with bladder cancer were shown to be unfounded in experiments onprimates.

TASK 1 Do you know any of the differences between Sugar and Saccharine? Discuss with your partner and write themdown.

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....

2)Howissugaraddictiveinhumans?Doyouhavesugarcravings?

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....

TASK 2 Revisit the Text and Reflect

Was the sweetness of Saccharine discovered accidentally?
Discuss your opinions about accidentaldiscoveries

....

....

TASK3

Here are some of the products that use artificial sweetener.Discusstheir pros and cons

TASK 4 Group Discussion

From the History of Saccharine invention, it is found that although Fahlberg and Remsen had worked together, in the later stage, Fahlberg ignored Remsen and applied for Patent. He did not give Remsen any credit of theinvention.

Divide the class into groups and begin a discussion on your views and opinion about the given situation with reference to the following questions.

1.Whom do you think deserve the credits of the Saccharine Invention?

2.WhatdoyouknowaboutthePatentingofscientificproducts?

3.Howdoyouassociatetheissuetothepresentcontext?

Form groups and may short presentations on the topics ADDICTION. You may use some of the cues given based on the passage discussed above.

CUES

-Sugar is also addictive like Drugs – Sweet sensation gives sensory pleasures - It is habit-forming just like alcohol, tobacco, nicotine, tea, coffee and chocolate as it triggers the brain- It provides comfort and is eaten for comfort eating at times of stress and distress- sugar consumption should be avoided and it is advisable to break the habit if you're addicted toit

TASK 6ReadandWordIt–Sweet,Sweeten,Sweetener

A single word can have many meanings. When we change the context/situation of its usage, the meaning also changes. Doesn't it sound interesting? In the Source Passage you learnt about Sacchrin, there is one suchword.

SWEET is a word that can function with many meanings in different sentences. It can do more than one job

Here is a chart detailing the parts of speech. Read it thoroughly and identify the parts of speech indicating the word Sweet in the sentences given in the parallelchart

READING

AIM:Understanding definitions, use of dictionary to decipher the meanings of words,

1.Discuss the different images that you see below and what they indicate. How has technology influenced our lives?What is smart technology?

Students watching computer headset

virtual reality

Technology in agriculture

Smart speaker   A person with hearing device

Pre-Task : Vocabulary

Fleet	A number of vehicles or aircraft operating together or under the same ownership.
Framework	A basic supporting structure
Harm	Injury
Off peak-hours	Not during the busiest period
Forecast	Predict or estimate a future event
Vital	Absolutely necessary
Humanitarian	Concerned with human welfare
Relief	Reassurance; financial or practical assistance
Hobbyists	A person who pursues a hobby
Concerns	Anxiety or worry

What is
the Internet of Things?
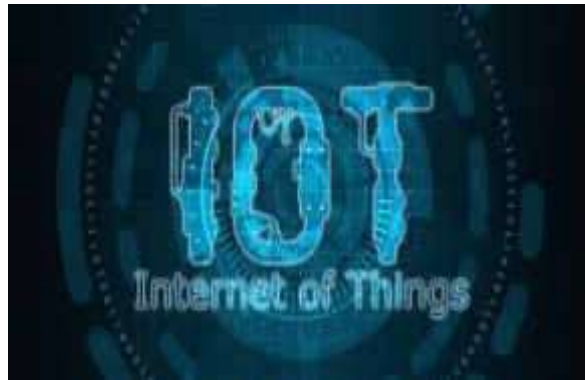
The Internet of Things (IoT) refers to the vast world of interconnected devices with **embedded sensors** which are capable of providing data, and in some cases, being controlled, across the Internet. Common examples include many home **automation devices**, like smart **thermostats** and remotely controllable lighting fixtures, but there are countless others, from traffic sensors to water quality meters to smart electric grid components to tracking manufactured goods and vehicle **fleets** worldwide.

Because of the rapid growth in the IoT space, there are a number of competing standards, tools, projects, policies, **frameworks**, and organizations hoping to define how connected devices communicate in the modern era.

What are some uses for IoTdevices?How you might make use of IoT connected devices depends a bit on whether you're more interested in collecting data or automating actions, and at what scale you are utilizing them.

- Indoor and outdoor lighting and electrical outlets which can be controlled by sensors, timers, and remote applications.
- Cameras, motion sensors, automatic locks, and other access control devices which can be integrated into advanced security and monitoring systems.
- Water leak sensors, smoke alarms, carbon monoxide sensors, and other devices designed to protect people and property from accidental **harm**.
- Electric car chargers, **battery banks**, and other devices which can intelligently charge at **off-peak hours** to save money and reduce peak energy demands.

For a government, company, or institution, IoT devices are a little different, and generally focus more on collecting data which can be processed and visualized, often in real-time. Some examples include:

- Utility companies are able to more accurately **forecast** energy and water demands, reducing waste.
- Advanced environmental sensors, include water, noise, and air quality monitors, can help understand pollution sources and effects before they negatively impact ecosystem and human health.
- Agencies charged with public safety can develop more advanced early warning systems for natural disasters like earthquakes and floods, and have better data with which to provide **vital** services like fighting fires and providing **humanitarian relief**.

Getting started with creating your own devices and software for the Internet of Things is surprisingly easy. There are numerous hardware

platforms targeted to beginners and **hobbyists** alike which have large communities behind them, including many which are partially or fully open hardware. Security and privacy are major **concerns** while using IoT which are currently being addressed by various industries and governments all over the world.

Source: https://opensource.com/resources/internet-of-things

1. What is the Internet of Things?

2. List some applications of IoT

3. How can governments make use of IoT?

4. What are the two major concerns while using IoT?

5. What would you want to use IoT to make your daily life more comfortable in some way?

6. Here are some terms discussed in the passage on the Internet of Things. Discuss in the class and write the definitions of these terms in the table below:

embedded sensors	
automation devices	
Thermostats	
battery banks	

Source Passage 2: Invention of Hydroxychlroquine

Pre Task: New Words and Concepts

Rheumatoid arthritis : a long-term autoimmune disease that

affects the body's moisture-producingglands

Quinine : a bittercrystalline compound present in cinchona bar

Speculative : engaged in, expressing, or based on conjecture rather than knowledge

Toxicity : the quality of being toxic or poisonous.

Cramps :painfulinvoluntary contraction of a muscle or

Qfever : an infectious fever causedby the bacterium Coxiella burnetii, which may be transmitted to humans from cattle, sheep, and other domesticated animals	muscles, typically caused by fatigue or strain
Nausea : a feeling of sickness withan inclination to vomit	**Hallucinations** : experience involving the apparent perception of something not present.
Anti-spirochete : any of a group ofspiral-shaped bacteria, some of which are serious pathogens for humans, causing diseasessuchas syphilis, yaws, Lymedisease	**Catatonia**:abnormality of movement and behaviour arising from a disturbed mentalstate
	Retinopathy : disease of theretina which results in impairment or loss of vision

Introduction

Hydroxychloroquine is a less toxic derivative of chloroquine and was discovered in 1945 as part of the efforts to lessen the toxic effects of chloroquine . It was approved for use in the US in 1955, and since then has been used for the treatment of a wide variety of diseases including arthritis, Systemic Lupus Erythematosus (SLE)etc.

Hydroxychloroquine (HCQ), is a medication used to prevent and treat malaria. It is also used for the treatment of rheumatoid arthritis, lupus, and porphyria cutaneatarda. HCQ is being studied to prevent and treat coronavirus disease 2019 (COVID-19). High-quality evidence of benefit for such use is lacking, with concerns of potential harm from its side effects.

Hydroxychloroquine is on the World Health Organization's list of essential Medicines, which has the most the safest and most effective medicines needed in a health system. In 2017, it was the 128th most commonly prescribed medication in the United States, with more than five million prescriptions. The speculative use of hydroxychloroquine for COVID-19 threatens its availability for people with established symptoms.

History

The HCQ story begins in 1638 when the wife of the Viceroy ofPeru, Countess Cinchona, acquired malaria while living in the New World. Rather than getting the "approved" therapy - blood-letting, she was treated by an Incan herbalist with the bark of a tree (eventually, named the countess-Cinchona Tree). Her response was dramatic; when the Viceroy returned to Spain, he brought with him large supplies of the powder for general use, which at the time was controlled by the Church and was thus called "Jesuit's Powder". It took nearly two centuries for the active substance, Quinine, to be isolated from the bark (and was eventually to make a name for itself as a tonic to be added togin).

Over the next century, quinine would become a common component in folk medicines and patent remedies for the treatment of malaria in the southern states of America, as well as for generic malaise. By the 1940s, quinine, or, rather its derivative chloroquine, was recognized for its anti-malarial properties and found use among troops fighting in the Pacific during WW-II. However, it was noted that this compound had significant toxicities. In 1945, a modification of this compound via hydroxylation led to the development of HCQ, which was found to be less toxic and remains in use, without change, to this day.

Uses

Hydroxychloroquine treats rheumatic disorders such as systemic lupus erythematosus, rheumatoid arthritis, and porphyria cutaneatarda, and certain infections such as Q fever and certain types of malaria. It is considered the first-line treatment for systemic lupuserythematosus. Certain types of malaria, resistant strains, and complicated cases require different or additionalmedication.

The medicine is widely used to treat primary Sjögren syndrome but does not appear to be effective. Hydroxychloroquine is widely used in thetreatment of post-Lymearthritis. It may have both an anti-spirochete activity and an anti-inflammatory activity, similar to the treatment of rheumatoid arthritis.

Adverse effects

The most common adverse effects of the medicine are nausea, stomach cramps, and diarrhoea. Other common adverse effects include itching andheadache. The most serious adverse effects affect the eye, with dose- related retinopathy as a concern even after hydroxychloroquine use is discontinued. Serious reported neuropsychiatric adverse effects of hydroxychloroquine use include agitation, mania, difficulty in sleeping, hallucinations, psychosis, catatonia, paranoia, depression, and suicidal thoughts. In rare situations, hydroxychloroquine has been implicated in cases of serious skin reactions such as Stevens-Johnsonsyndrome, toxic epidermal necrolysis, and drug reaction witheosinophilia and systemic symptoms. Reported blood abnormalities with its use include lymphopenia, eosinophilia, and atypical

lymphocytosis. Children may be especiallyvulnerable to developing adverse effects fromhydroxychloroquine.

1. List the various uses of Hydroxychloroquine given in the passage.

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2. Can Hydroxychloroquine prevent the severity of Covid-19?

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TASK 2 :Rearrange the given words in the proper order

1)   prevent/treat/and/medication/to/used/a/HCQ/is/Malaria

....

2)   had/toxicities/compound/significant/the

....

3)   additional/malaria/types/certain/of/requires/medication

....

4)bark/took/it/centuries/two/the/isolated/the for/from/bark/be/Quinine

....

5)include/effects/common/adverse/other/itching/headache/and

....

Pre -Task: Elicit students responses on their knowledge about Marie Curie

Marie Curie was born in Poland she lived till she was twenty- She was the fifth child in her She had a difficult childhood as her parents and one of her died before she was fifteen as graduated from school.

where two. family. both sisters she

Marie was an excellent student managed to move to Paris to her higher degrees and start scientific work. She had to overcome severe financial difficulties in order to pursue interest in academics and research.

and she earn her

her

Curie was married to her colleague Pierre Curie and had two daughters. The couple discovered Radium and Polonium and worked together to study radioactivity for which they received the Nobel prize in Physics. Pierre was an exceptional physicist but died in an accident in 1903.

Curie continued her work in radioactivity and received her second Nobel Prize in Chemistry in 1911 for the isolation of pure Radium. She made contributions to the medical field through her research and applications of X-Radiography, especially during World War I. X-Ray had already been discovered by Rontgen in 1895; and electrons were discovered in 1897 by J.J. Thomson. These discoveries together with the knowledge of radioactivity ushered in the era of modern Physics.

Marie Curie was the first woman to win a Nobel Prize and also the first person to receive two Noble prizes. In 1935, another Nobel Prize would come to the family, as Curie's daughter Irene would win the Noble Prize in Chemistry with her husband for their work on artificial radioactivity.

Curie's contributions to Nuclear Physics is immeasurable. She has also been an inspiration to girls all over the world who want to pursue a career in Physics and Chemistry.

References:

Britannica, T. E. (Ed.). (2020, April 16). *Marie Curie.* Retrieved June 18, 2020, from Encyclopædia Britannica.

Wikipedia, T. E. (Ed.). (16, June 2020). *Marie Curie.* Retrieved June 18, 2020, from Wikipedia.

TASK 1: Answer the following questions.

1. Describe Curie's childhood.

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2. Who discovered the electron? Which year was it discovered?

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3. Briefly describe Marie Curie's contributions to the field of Science.

WRITING

The War of Currents

In the late 1800s, businessman and inventor Thomas Edison was developing a practical application of direct (or DC) current to power homes, businesses, and entire cities.

Source: https://physicsabout.com/difference-between-ac-and-dc/
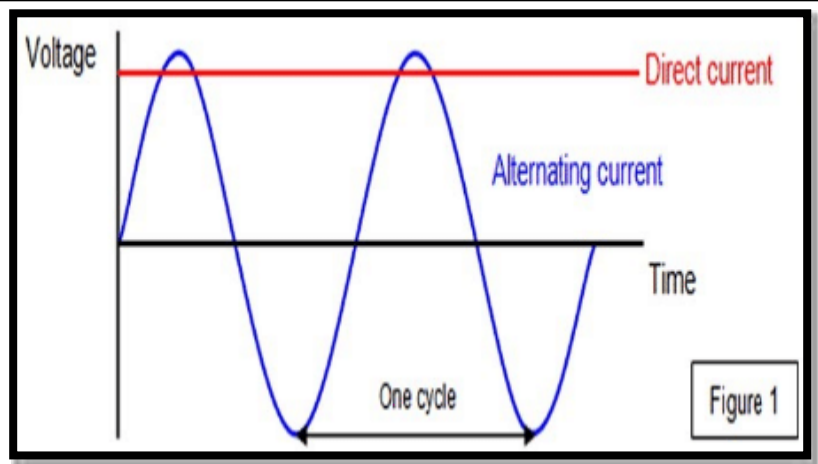
However, he was quickly presented with a serious issue--direct current could not be converted to higher or lower voltage, and it could not be transferred reliably over long distances.

Meanwhile, Nikola Tesla, a Serbian **immigrant** with extensive background in physics and engineering, received a **patent** for his alternating current (or AC) induction motor. This motor, in short, posed a solution to many of the issues DC motors presented, and **paved the way** for alternating current.

George Westinghouse, inventor and industrialist, bought Tesla's patents and **implemented** them on a large scale to **rival** Edison's growing business of **monopolizing** the electrical industry. Edison noticed the efforts of the alternating current being used against direct current and decided to campaign against it by spreading misinformation and playing up its dangers. He spent money on public electrocutions of animals and developed the electric chair to **execute** criminals.

Alternating current looked like it might fail thanks to the efforts of Edison-- but this was soon to change.

The Chicago World's Fair of 1893 was the greatest blow to Edison and his direct current monopoly. General Electric, owned by Edison, **petitioned** to electrify the fair for $544,000. Westinghouse Electric Company however, owned by Westinghouse, proposed a budget of $399,000 with use of Tesla's alternating current, and received the **privilege** of supplying the light. Alternating current was hailed as being superior to DC and remains to this day the **predominant** current for large-scale power supply.

Created by: A. Hall, A. Newton, and J. Downey. GitHub.

Link: http://warofcurrents.newtfire.org/

Write a short passage comparing and contrasting Alternative Current and Direct Current

Write a short paragraph (10 sentences) based on the passage on the War of Currents describing the main idea discussed in the passage, and the supporting evidence for the main idea.

Pre Task :The New Words and Concepts

Petroleum jelly : translucent jelly consisting of a mixture of hydrocarbons	Insulator : a substance which does not readily allow the passage of heat or sound
Deodorants : a substancewhich removes or conceals unpleasant smells	Tissue dehydration : removal of water from the aqueous-fixed tissue
Cleansers : a substance toclean Something	Refined : with impurities or unwanted elements having been removed by processing
carcinogenic : having the potential to cause cancer	Characterized : describe the distinctive nature or features of something.

Introduction

Vaseline is a kind of petroleum jelly-based products. The products include plain petroleum jelly and many varieties of skin creams, soaps, lotions, cleansers, and deodorants. Petrolatum, or petroleum jelly, derived from petroleum, is often used in personal care products as a moisturizing agent. In many languages, the word "Vaseline" is used as generic for petroleum jelly; in Portugal it is called as Vaselina, and in Brazil and some Spanish-speaking countries, the products are called as Vasenol.

An image from Vaseline companyarchives

History

In 1859, Robert Chesebrough went to the oil fields in Titusville,Pennsylvania, and learnt about a residue called "rod wax" that had to be periodically removed from oil rig pumps. The oil workers had been using the substance to heal cuts and burns. Chesebrough took samples of the rod wax back to Brooklyn, extracted the usable petroleum jelly, and began manufacturing a medicinal product calledVaseline.

The name Vaseline was first coined by Chesebrough and filed a U.S. patent (U.S. Patent 127,568) in 1872. The name "vaseline" is said by the manufacturer to be derived from German*Wasser* "water" + Greek (*elaion*) "olive oil". Vaseline was made by the Chesebrough Manufacturing Company until the company was purchased by Unilever in 1987.

Sources

White petrolatum, the ingredient in petroleum jelly Vaseline, is refined from petroleum.

Vaseline in its container

Uses

Vaseline can be used as a lubricant, it can also be used as a moisture insulator for local skin conditions characterized by tissue dehydration. Vaseline has been reported to be highly refined, triple-purified and regarded as non-carcinogenic

TASK 1: WritetwoimportantthingsyouknowaboutVaseline?

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TASK2: Revisit the Text and Reflect

a)	Name the generic terms of petroleum jelly in Portugal, Brazil andSpain

b)	NamethepersonalcareproductsthatusePetroleumJelly

c)	How did Chesebrough manufactureVaseline?

TASK3:Say whether following sentences are True or False

a)	Vaseline is a moisturizingagent
b)	TheRodwaxisusedtohealcutsandburns
c)	Vaseline is a non-medicinalproduct
d)	ThenameVaselineisderivedfromwaterandoliveoil
e)	Vaseline iscarcinogenic

TASK 4:Use the Youtube link given below to watch the video and complete the following passage choosing the right word given in brackets

https://www.youtube.com/watch?v=ubpsosv7mHM

Petroleum jelly is easy to findand_____

_____(ineffective/inexpensive). It is chemically

similartoskin_____(protein/vitamin). Dermatologist suggestsitfor_____(medicinal/non-medicinal) tips and tricks. It is usedforthetreatmentofchappedlips,_____(nails/cuticles), hands andfeet.

TASK 5:Identify the differences between the given set of words taken from the Sourcepassage

a)   Petroleum   c)Residue

PetroleumJelly   Extract

WhitePetrolatum   Product

b)   Moisturizer   d) Removed Cleanser

           Refined

Lubricant   Purified

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SOURCE PASSAGE 3 :BOOLEANALGEBRA

Pre-Task : New Words and Concepts

Algebra : the part of mathematics inwhich letters and other generalsymbols are used to representnumbers and quantities informulae and equations	Negation : the absence or opposite of something actual or positive
Conjunction: the action or an instance of two or more events or things occurring at the same point in time or space	Logic circuits : a circuit for performing logical operations on input signals
Disjunction : the relation of two distinct things	Binary Decision: **binary decision** is a choice between two alternatives, for instance between taking some specific action or not taking it

INTRODUCTION

In mathematics and mathematical logic, **Boolean algebra** is the branch of algebra in which the values of the variables are the truthvalues true and false, usually denoted 1 and 0, respectively. Instead of elementary algebra where the values of the variables are numbers, and the prime operations are addition and multiplication, the main

operationsofBooleanalgebraaretheconjunction(and)denotedas∧, thedisjunction(or)denotedas∨,andthenegation(not)denotedas¬. It is thus formalism for describing logical operations in the sameway

that elementary algebra describes numericaloperations.

History

Boolean algebra was introduced by George Boole in his first book "The Mathematical Analysis of Logic" (1847), and set forth more fully in his "An Investigation of the Laws of Thought" (1854). According to Huntington, the term "Boolean algebra" was first suggested by Sheffer in 1913, although Charles Sanders Peirce in 1880 gave the title "A Boolean Algebra with One Constant" to the first chapter of his "The Simplest Mathematics". Boolean algebra has been fundamental in the development of digital electronics, and is provided for in all modern programming languages. For example, the empirical observation that one can manipulate expressions in the algebra of sets by translating them into expressions in Boole's algebra is explained in modern terms by saying that the algebra of sets is a Boolean algebra. In fact, M. H.Stoneproved in 1936 that every Boolean algebra is isomorphic to afieldofsets.Itisalsousedinsettheoryandstatistics.

In the 1930s, while studying switching circuits, Claude Shannon observed that one could also apply the rules of Boole's algebra in this

setting, and he introduced switching algebra as a way to analyze and design circuits by algebraic means in terms of logic gates. Shannon already had at his disposal the abstract mathematical apparatus, thus he cast his switching algebra as the two-element Boolean algebra. In circuit engineering settings today, there is little need to consider other Boolean algebras, thus "switching algebra" and "Boolean algebra" is often used interchangeably. Efficient implementation of Booleanfunctions is a fundamental problem in the design of combinationallogic circuits. Modern electronic design automation tools for Very large-scale integration (VLSI) circuits often rely on an efficient representation of Boolean functions known as (reduced ordered) binary decision diagrams (BDD) for logic synthesis and formalverification.

Applications

Boolean algebra as the calculus of two values is fundamental to computer circuits, computer programming, and mathematical logic, and is also used in other areas of mathematics such as set theory and statistics.

Recent days, all modern general purpose computers perform their functions using two-value Boolean logic; that is, their electricalcircuits are a physical manifestation of two-value Boolean logic. They achieve this in various ways: as voltages on wires in high-speed circuits and capacitive storage devices, as orientations of a magneticdomain in ferromagnetic storage devices, as holes in punched cards or paper tape, and soon.

TASK 1

a.Whom do you consider as the creator of Boolean Algebra? Discuss its origin andevolution
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b.   What have you understood about the application of Boolean Algebra?…………………………………………………………………
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☐   **TASK 2:**Combinethesentencebarsusing"OR" & "AND" in theexamplesgiven

OR (V)	AND (∧)
Do you need pen or paper?	I need pen and paper
Shall I buy lemon or oranges?	You buy…………..
…………………………………………	I want a trip to sea and mountain?
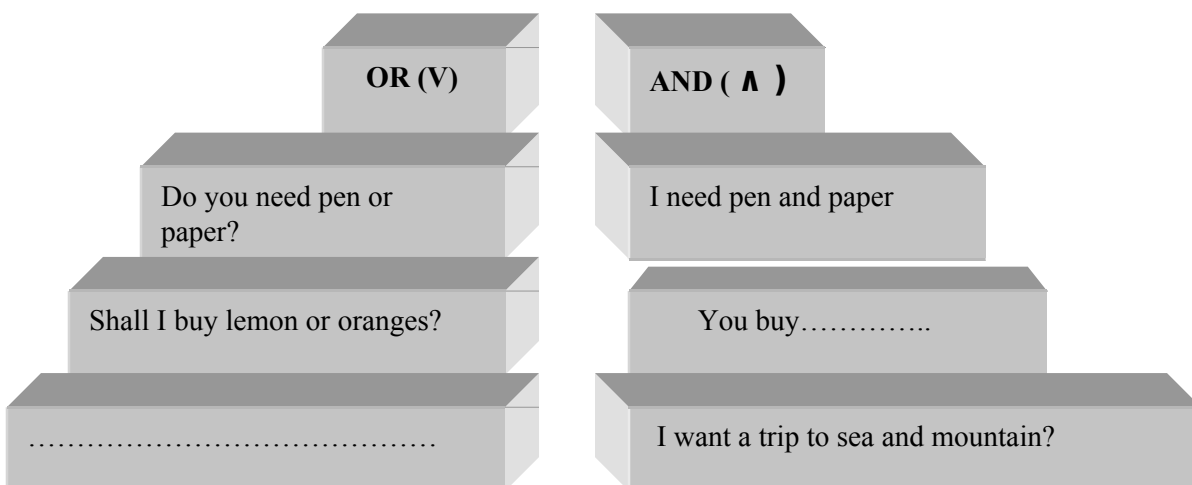
Notes...
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<mark>TASK 3</mark>Think in Pictures
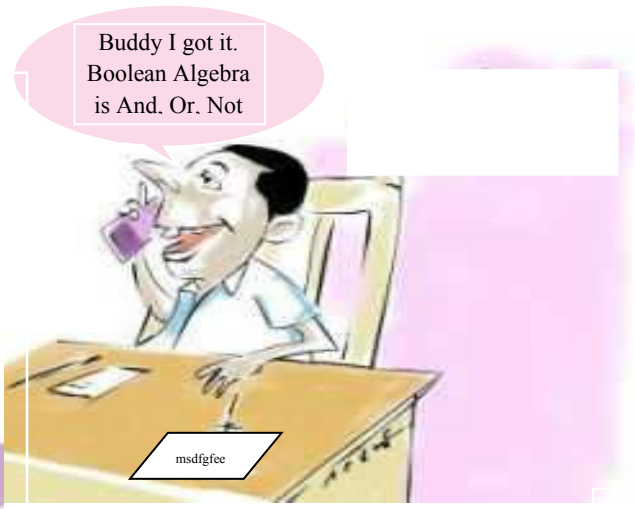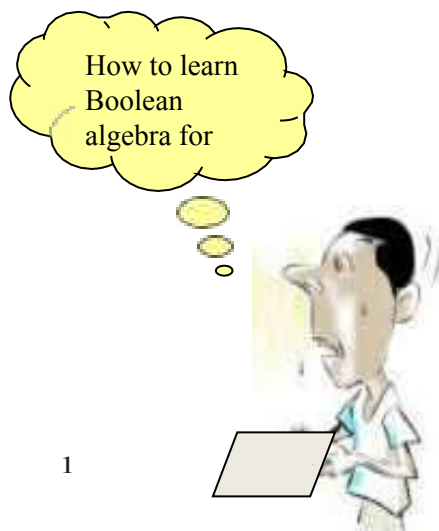
1. Use your imagination to develop a story from the above cartoon strip. Give the story a beginning, a climax (turn-ingpoint) and an ending. You can add details about the setting of the story (time and place) and the characters (name, profession, personality traits, etc.). Discuss your ideas with your partner and modify the story. You may then narrate the story to your class. Havefun!!

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TASK 4 .Make a list on the everyday applications of two-value Boolean logic and present it in theclass

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COMMUNICATION

PROCESS DESCRIPTION

A process description **describes** how something works, beginning with general information to the specific. The description can be a flow chart or a schematic representation that shows steps of actions in the process in sequential order. The sequential order is identified by using link words such as "first, initially, then, thereafter, finally, next, etc." Process description should be written in the passive voice and simple present tense

TASK 1 **Listen to the following passage and draw a flow chart:**

Process Of Making Photocopies

Static electricity enables a photocopier to produce almost instant copies of documents. At the heart of the machine is a metal drum which is given a negative charge at the beginning of the copying cycle. The optical system then projects an image of the document on the drum. The electric charge disappears where light strikes the metal surfaces, so only dark parts of the image remain charged.

Positively charged particles of toner powder are then applied to the drum. The charged parts of the drum attract the dark powder, which is then transferred to a piece of paper. A heater seals the powder to the paper, and a warm copy of the document emerges from the photocopier.

SPEAKING

Role Play

Role-play is an effective speaking activity. It is a technique that allows students to explore realistic situations by interacting with others. The role play helps students to develop different and strategies in a supported environment. Through this role-play a student can put him from different situations and act; indeed this acting will help him develop an understanding of the situation from the 'opposite' point of view.

Role play is remarkably interesting with imaginary people and imaginary situations. The joy of role-playing is that students can 'become' anyone they like for a short time! The President, the Queen, a millionaire, a pop star ……. the choice is endless! Students can enjoy an imaginary situation where they get the liberty to use language interestingly. 'At the restaurant', 'Checking in at the airport', 'Looking for lost property' are all possible role-plays.

TASK 1

1. Imagine yourself as an employee in a multinational company as a Team Leader. You are explaining to your teammates the recent project and the importance of completing it in a month and Clear the doubts raised by your team members as and when they ask them.

2. Imagine yourself as a student of Computer Science, and you attend a Lab class, and you discuss the use of learning computer graphics and cryptography with your friends.

READING

I. Pre- task:

1. What kind of reading strategy do you follow to decipher the meaning of any text?
2. What do you mean by ***reading between the lines***?
3. Which among the following do you consider as the most effective reading method to comprehend a text?

4. Identify the ways to speed up reading and comprehending skills?

II. Read the following passage and answer the questions below!
(Your teacher will help you find out the meanings of the difficult words/phrases in the passage)

THE EFFECT OF MOBILE PHONES

Can talking on a **mobile phone** be **hazardous** to your health? It is difficult to know for sure. Some research suggests that heavy users of mobile phones are at a greater risk of developing cancerous brain tumors. However, many other studies suggest that there are no links between cancer and mobile phone use. The main problem with current research is that mobile phones have only been popular since the 1990s. As a result, it is impossible to study **long-term exposure** to mobile phones. This concerns many health professionals who point out that certain cancers can take over twenty years to develop. Another concern about these studies is that many have been **funded** by the mobile phone industry or those who benefit from it.

Over five billion people now use mobile phones daily, and many talk for more than an hour a day. Mobile phone antennas are like microwave ovens. While both rely on **electromagnetic radiation** (EMR), the radio waves in mobile phones are lower in frequency. Microwave ovens have radio wave frequencies that are high enough to cook food, and they are also known to be dangerous to human **tissues** like those in the brain. The concern is that the lower-frequency radio waves that mobile phones rely on may also be dangerous. It seems **logical** that holding a heat source near your brain for a long period is a potential health hazard.

Some researchers believe that other types of wireless technology may also be dangerous to human health, including cordless phones, wireless **gaming consoles**, and laptop or tablet computers with wireless connections. They suggest replacing all cordless and wireless **devices** with wired ones where possible. They also say that many cordless phones can emit dangerous levels of Electromagnetic Radiation even when they are not in use. They even suggest keeping electronic devices such as desktop and tablet computers out of the bedroom, or at least six feet from the head while we're sleeping.

A growing number of health professionals worldwide are recommending that mobile phone users **err on the side of caution but this cannot be accepted,** until more **definitive** studies can be **conducted**. They use the example of **tobacco** to **illustrate** the **potential** risks. Many years ago, people smoked freely and were not concerned about the effects of cigarettes on their health. Today, people know that cigarettes cause lung cancer, though it is still unknown exactly how or why. Some doctors fear that the same thing will happen with mobile phones. In May 2016, the UK's Independent newspaper reported on research by the US government's National Toxicology Program that showed a slight increase in brain tumors among rats exposed to the type of radio frequencies commonly emitted by mobile phones. This doesn't prove that mobile phones can cause brain tumors in humans, but it does show that it's possible. As a result, many experts now recommend texting or using headsets or speakerphones instead of holding a mobile phone to the ear.

Source: https://www.englishclub.com/reading/health/cell-phone.htm

TASK 1- Test your reading:

1. How does the usage of mobile phones affect our health?
2. In what way does a cordless phone harm our body?
3. What are the dangers caused by the microwave oven to humans?
4. Why should electronic gadgets be kept out of the bedroom while sleeping?
5. What was the finding of the US government's National Toxicology?

TASK 2 Study the following detailed graph on the use of electrical gadgets and answer the questions given below:

Electrical Gadgets Usage
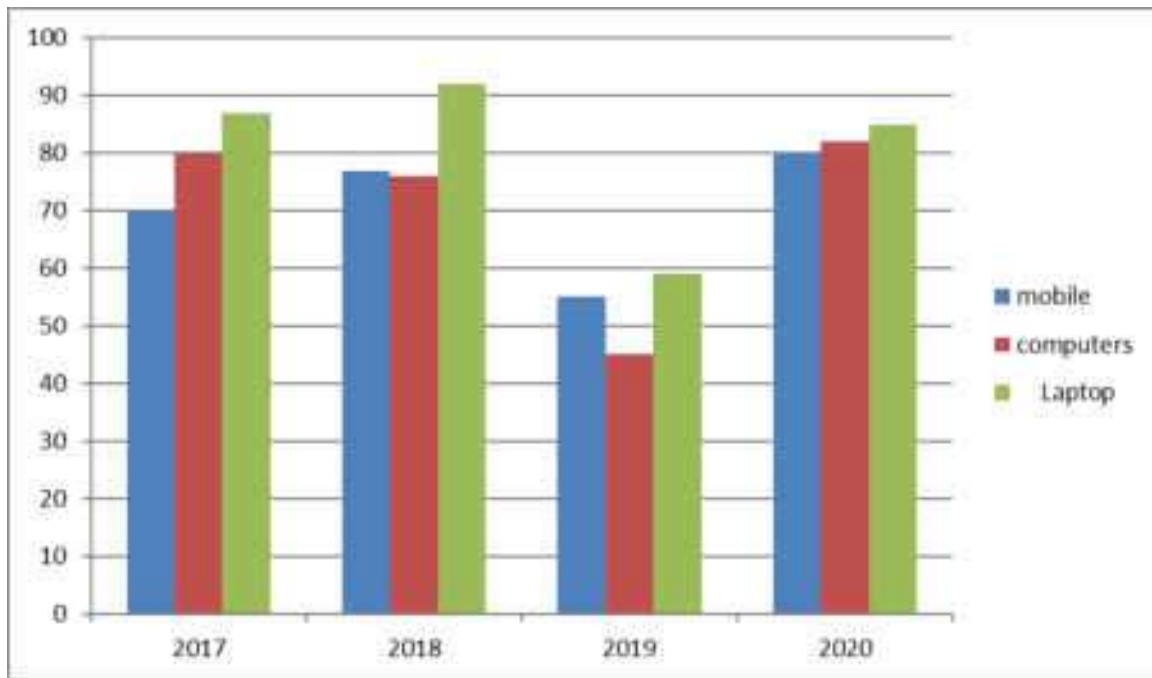
1. Identify the type of graph given above.
2. What are the electrical gadgets mentioned in the graph?
3. Which Appliance has the least Usage in 2019? Which Gadget was mostly used by people in 2017?
4. What are the uses of these electrical gadgets in today's world?
5. What will the increase in the usage of electronic devices lead to?

TASK 3- **Discuss in groups and collect ideas on the use of the following electrical gadgets and their impact (Positive /and Negative) on the lives of people.**

1. Mobile Phone
2. Microwave Oven
3. Refrigerator
4. Earphone
5. Wi-Fi Router

DEFINITIONS

The word 'definition' originates from the word 'define', which 'states exactly what a thing is'. A definition has two distinct elements. First, the term should be identified as an item of a large group or category. Then its distinguishing characteristics are to be specified in such a way that no other object, device, or process fits into the definition.

1. Use of articles: A definition usually begins with an article 'a', 'an' or 'the'.
2. State what it is – whether it is a tool, or, a device, a machine, a component, an instrument, or, a concept, or an idea or a study.
3. Describe the primary use(s) of the thing.
4. State the condition of the thing, description of the thing.(parts) etc.

Example:

1. An abacus is an ancient device that is used for arithmetic calculations.

2. A lathe is a machine for shaping metal or wood.

3. Acoustics is a branch of science that deals with sounds.

4. A burette is an apparatus used in labs for chemical analysis which is used to measure the volume of a liquid or gas. **It is made up of a glass tubewith measurements marked on it**.

5. An accelerator is a device for increasing speed, especially the pedal in a vehicle that controls the speed of the engine.

EXERCISE: Write the definitions for the following words

1. Barometer:

2. Computer program:

3. A flow chart:

4. Gober gas plant:

5.Microphone:

Extended Definitions

Defining a **word** can be with a synonym, a brief phrase, or a formal sentence that explains the **term** in its most basic form.

Terms are words, compound words, or multi-word expressions that are given specific meanings in specific contexts —these may deviate from the meaning the same words have in other contexts.

Steps to write extended definitions:

● Explain the word and its term.
● Describe its **Classification, principle, and its operation.**
● Discuss its **Cause and Effect attributes,** and its parts
● **Compare and contrast, if needed.**

Example:

Mini drafter / Drafting machine:

It is a device with two scales set at right angles to each other. It combines the functions of T-square, set squares, scales, climograph, and protractors. It can be moved easily and quickly to any location on a drawing sheet without altering the relative horizontal and vertical positions of two scales. The edges of the scales are used for measuring as well as drawing

Write extended definitions for the following terms

1. Radiator:

2. Rheostat:

3. Robot:

4. Scientist:

5. Sensor:

SOURCE PASSAGE: HISTORY OF MATCHES AND LIGHTERS

The fire was the basis of modern human kind and a catalyst for the expansion of our ancestors beyond the borders of Africa. It gave us the power to survive in harsh

environments, process food, and change the shape of the environment we live in. As the millennia went on, and the human race started developing advanced tools from the first Neolithic civilizations, the ability to create fire became common place all around the world. However, that process was still slow, unreliable, and dependent upon many conditions (rain, wind, low portability).Because of these problems, many scientists, chemists, and engineers of the early human civilizations (Mesopotamia, Egypt, India, China, Greece, and Rome) tried to find some ways to make a fire which would be portable and reliable. Since they lacked the knowledge of chemistry and physics; their early efforts were unsuccessful. The only relatively successful of example of the making fire came from China in the 5thcentury
AD, where sulphur coated wooden sticks were used as a catalyst for creating fire. By the 10th century manufacture of these "light-bringing slaves" or "fire inch-sticks" was found in all parts of China, but the self-igniting match stick was not found.

1000 years passed, and scientists still did not come close to finding the way how to create a self-igniting source of fire that could be used reliably by the general population(few impractical and extremely dangerous

chemical reactions were present). The basis of the modern match and lighter technology was founded by none other than Hennig Brandt, a German merchant, pharmacist, and alchemist, in the second half of the 17th century,who in his entire life dreamed of creating gold from other metals. During his career, he managed to extract pure phosphorus and test his interesting flammable properties. Even though he discarded phosphor in his alchemic experiments, his notes proved to be an important stepping stone for future generations of inventors. The first match was created in 1805 by Jean Chancel in Paris. This crude match looked nothing like the modern "striking" matches we use today. Instead of using phosphorus, Chancel elected to coat a wooden stick with potassium chlorate, sulphur, sugar, rubber, and then dip that stick into the small asbestos bottle filled with sulphuric acid. The connection between acid and the mixture on the stick would start the fire and release very nasty fumes into the face of the user. Over the last 200 years, scientists, and engineers from all over the world managed to create match sticks that we use today.

Glossary of Terms:

a. **Millennia:** plural of millennium
b. **Neolithic:** relating to the period when

humans used tools and weapons made of
stone and had just developed farming

c. **Alchemist**: a person who uses or seems
to use alchemy (change ordinary metals
into gold)

d. Flammable: Something that is flammable burns easily

e. **Discard:** to throw something away or get
rid of it because one no longer wants it.

1. Think of things people do with the matches and lighters. Use
theseverbs:

a. strike the match

   ………………………………………………………………………

   …………………………………………………………………………

   ………..

b. generate heat

   ………………………………………………………………….…

   …………………………………………………………………………

   ………..

c. set fire

   ……………………………………………………………………..

   …………………………………………………………………………

   ………..

d. ignite the stove

   ………………………………………………………………….

   …………………………………………………………………………

   ………..

e. light the candle

   ………………………………………………………………….

   …………………………………………………………………

   ………..

1. Gold   2.Potassium chlorate 3. 1805   4. 5th Century   5. Other metals

    f. Wooden sticks coated with sulphur paved the way as a catalyst for fire in …………….

    g. Chancel opted wooden stick with than

      phosphorus.

    h. Hennig Brandt dreamt of ……………… from

      other …………………. in his lifetime.

    i. Jean Chancel was instrumental in creating the first match in Paris in

      ………………...

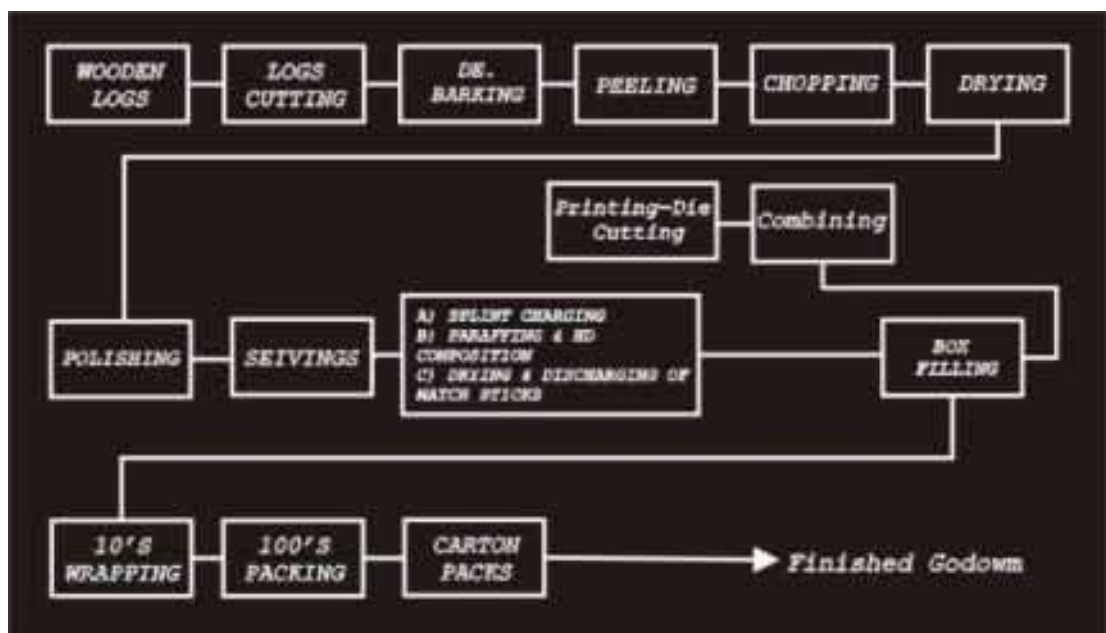2. Write a few sentences about each of these pictures belowexpressing their purpose:

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TASK 4: Use the following hints and discuss in pairs the technology of thefuture. Present the facts to the others in the class:

Imagine a world where wireless devices are

as small as a grain of salt. These miniaturized devices have sensors, cameras, and communication mechanisms to transmit the data they collect back to a base to process. Today, you no longer have to imagine it: microelectromechanical systems (MEMS), often called motes, are real and they very well could be coming to a neighborhood near you. Whether this fact excites or strikes fear in you it's good to know what it's allabout.

SOURCE PASSAGE: LIGHT-EMITTING DIODE (LED)

A light-emitting diode (LED) is a semiconductor light source that emits light when current flows through it. Electrons in the semi conductor recombine with electron holes, releasing energy in the form of photons. The colour of the light (corresponding to the energy of the photons) is determined by the energy required for electrons to cross the band gap of the semiconductor. White light is obtained by using multiple semiconductors or a layer of light-emitting phosphor on the semiconductor device.

Appearing as practical electronic components in 1962, the earliest LEDs, emitted low- intensity infrared (IR) light. Infrared LEDs are used in remote-control

circuits, such as those used with a wide variety of consumer electronics. The first visible-light LEDs were of low intensity and limited to red. Modern LEDs are available across the visible, ultraviolet (UV), and infrared wavelengths, with the high light output.

Early LEDs were often used as indicator lamps, replacing small incandescent bulbs, and in seven-segment displays. Recent developments have produced high-output white light LEDs suitable for room and outdoor area lighting. LEDs have led to new displays and sensors, while their high switching rates are useful in advanced communications technology. The first white LEDs were expensive and inefficient. However, the light output of LEDs has increased exponentially. The latest research and development has been propagated by Japanese manufacturers such as Panasonic, and Nichia, and by Korean and Chinese manufacturers such as Samsung, Kingsun, and others. This trend in increased output has been called Haitz's law after Dr.Roland Haitz. Light output and efficiency of blue and near-ultraviolet LEDs rose and the cost of reliable devices fell. This led to relatively high-power white-light LEDs for illumination, which are replacing incandescent and fluorescent lighting. Experimental white LEDs

have been demonstrated to produce 303 lumens per watt of electricity (lm/w); some can last upto 10,000hours. However, commercially available LEDs have an efficiency of upto 223 lm/w. Compared to incandescent bulbs, this is a huge increase in electrical efficiency, and even though LEDs are more expensive to purchase, the overall cost is significantly cheaper than that of incandescent bulbs.

Glossary of Terms:

a. **Intensity:** the quality of being felt strongly or having a strong effect

b. **Infrared:** a type of light that feels warm but cannot be seen.

c. **Incandescent:** producing a bright light from a heated filament or other parts

d. **Exponentially**: in a way that becomes quicker and quicker as something that increases becomes larger

e. **Propagate:** to produce a new plant using a parent plant

Note: Freewriting is very much like brainstorming. Here, too, you tap your natural creativity, free from the confines of structured thought. Write your ideas as they pop into your mind and then revise what you have written.

TASK 1:Write in about 50 words without making corrections or refining your text,

the ways and means of saving electricity.

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TASK 2 LED Display is a screen display technology that uses a panel of LEDs as the light source. Currently, a large number of electronic devices, both small and large, use LED display as a screen and as an interaction medium between the user and the system. Modern electronic devices such as mobile phones, TVs, tablets, computer monitors, laptops screens, etc., use a LED display to display their output. Discuss with your friends the uses of these devices – Report your ideas to the class, when your teacher asks you.

electronics handhelds consumption light-emitting advantage

The LED display is one of the main screen displays that are being commercially used. The biggest …………….. of the LED display is it is efficient and low-energy…………………., which is especially needed for ……………… and chargeable devices such as mobile phones and tablets. An LED display consists of many LED panels that, in turn, consist of several LEDs. LEDs have numerous advantages over

other …………………. sources that can be used alternatively. Aside from being power efficient, LEDs produce more brillianceandgreaterlightintensity.LED Display is different from the vacuum fluorescent display used in some consumer………………..

Such as car stereos, video cassette recorders, etc., and, hence, these two should not be confused with eachother.

By	for	of	in	to

The colour of the light (corresponding to the energy of the photons) is determined by the energy required electrons .…………………. cross the band gap of the semiconductor. White light is obtained …………. Using multiple semi conductors or a layer………………light-emitting phosphor on the semiconductor device. Appearing as practical electronic components in 1962, the earliest LEDs emitted low- intensity

[infrared](IR) light. Infrared LEDs are used ………………… [remote-control] circuits, such as those used with a wide variety of consumer electronics.

SOURCE PASSAGE: APPLIED NUMBER THEORY IN ATM

Some novel applications of elementary andparticularlyalgorithmicnumber theory have been employed to design computer (both hardware and software) systems, coding and cryptography, and information security, especially network/communication security. Leonard Eugene Dickson (1874- 1954),oneofthekey figuresof20th-centurymathematics,particularlynumber theory,wasborninIndependence,Iowa,a descendantofoneWilliamDickson whohademigrated from NorthernIrelandtoLondonderry,New Hampshire in the 18th century. Dickson obtained his Ph.D. in 1896 from the UniversityofChicago,thefirstPh.D.award edinMathematicsbytheinstitution. One of the most productive of all mathematicians, Dickson wrote over 250

papersand18books,includingthethree-volume1600page*HistoryoftheTheory ofNumbers*.

The most famous English mathematician G. H. Hardy (1877-1947) in his *Apology* stated that if the theory of numbers could be employed for any practical and honorable purpose, and if they could be turned directly to the furtherance of happiness or relief from suffering, as physiology and even chemistry can, then, surely, neither Gauss nor any other mathematician would have been so foolish as to decry or regret such applications.

Glossary of Terms:

a. **Cryptography**: the practice of creating and understanding codes that keep informationsecret

b. **Descendant:** a person who is related to you and who lives afteryou.

c. **Emigrate:** to leave a country permanently and go to live in anotherone.

d. **Furtherance:** the process of helping something to develop ormake progress.

e. **Decry:** to criticize something as bad, without value, orunnecessary

TASK1.Which of these sentences from the text are true, andwhich are false?

a. William Dickson was the descendant of Leonard EugeneDickson.

b. G H Hardy wrote the "History of the Theory

ofNumbers".

c. G H Hardy was of the view that the theory of numbers could not be employed for any practical and honorablepurpose.

d. William Dickson, one of the most productive of all mathematicians, belonged to the 18thcentury.

e. Gauss said that human sufferings can be relieved through physiology and evenchemistry.

TASK 2:Express your views on the advantages and disadvantages of ATM (Automated Teller Machine) when compared to the Teller in aBank.

The**table shows some compare and contrast expressions that we can make use of when we compare or differentiate two or more items or topics.**

ADDING	And, also, as well	As, moreover,	Besides, also	Furthermore
CAUSE & EFFECT	Because, so,	Therefore, thus,	Consequently,	As a result of
SEQUENCING	Next, then	Firstly, secondly, finally	Meanwhile, after Before	Eventually
CONTRASTING	Whereas, instead of, unlike	Alternatively, otherwise	On the other hand	In contrast However

QUALIFYING	However, although	Unless, except	If, as long as, apart from	Yet, despite
EMPHASIZING	In particular	Especially, notably	Significantly, indeed	Most of all Above all
ILLUSTRATING	For example, such as	As revealed by, For instance	In the case of	As shown by
COMPARING	Equally, in the same way	Like, similarly, similar to	Likewise, in comparison with/to	As with, as compared with,

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Read the following excerpt written by Ramanujan on 31st January 1913 to a mathematician named G. H. Hardy in Cambridge, England. Fill in the blanks in the letter with the words given below. Also discuss with your friends the style of writing used by Ramanujam. How different is it from the style adopted to draft emails and letters today.

| University | investigation | conventional | approximates |
| enclosed | convinced | published indicated |
| Inexperienced excused |

Dear Sir,

I beg to introduce myself to you as a clerk in the Accounts Department of the Port Trust Office at Madras on a salary of only £20 per annum. I am now about 23 years of age. I have had no ………….. education but I have undergone the ordinary school course. After leaving school I have been employing the spare time at my disposal to work at Mathematics. I have not trodden through the ………… regular course, which is followed in a University course, but I am striking out a new path for myself. I have made a special …………… of divergent series in general and the results I get are termed by the local mathematicians as "startling"

Third Paragraph

Very recently I came across a tract published by you styled Orders of Infinity in page 36 of which I find a statement that no definite expression has been as yet found for the number of prime numbers less than any given number. I have found an expression which very nearly ………… to the real result, the error being negligible. I would request you to go through the ……….. papers.

Fourth paragraph

Being poor, if you are ………. that there is anything of value I would like to have my theorems ……….. I have not given the actual investigations nor the expressions that I get but I have ……….. the lines on which I proceed. Being …………. I would very highly value any advice you give me. Requesting to be ………… for the trouble I give you.

I remain, Dear Sir,

Yours truly,

S. Ramanujan

The storyofthenumber 1729 goes back to 1918 when…………(India)

mathematician Srinivasa Ramanujan lay sick in aclinicnear….(odoLnn)and

his friend and collaborator G.H. Hardy visited

him. Hardy said that he had arrived in

…………… (tax) number 1729 anddescribedthe

………………………………………………….(unborn) "as rathera

Raman's Equipment and Experimental Setup

Pre Task : Key Terms

Acoustic	A branch of physics that deals with the study of mechanical waves in gases, liquids, and solids

Optics	A branch of physics that studies the behaviour and properties of light
Opalescence	The quality of reflecting light and changing colour with reference to an opal
Polarizing	To make optical waves to oscillate in one particular direction or to make light waves move only in one direction
Surface reflection	The reflection that occurs when light wave bounces off an object
Diffraction grating	An optical element that disperses light composed of lots of different wavelengths (e.g., white light) into light components by wavelength
Molecules	An electrically neutral group of two or more atoms held together by chemical bonds
Molecular diffraction	Various phenomena that occur when a wave encounters an obstacle or a slit, otherwise knowns as the bending of waves around the corners of an obstacle, caused by molecules
Fluorescence	The emission of light by a substance that has absorbed light or other electromagnetic radiation
Acoustic optical effects	The interaction of light (optics) and sound (acoustics).
Infrared spectra	An electromagnetic radiation (EMR) with wavelengths longer than those of visible light.
Heliostat	An apparatus containing a movable mirror, used to reflect sunlight in a fixed direction
Refracting telescope	(also called a refractor) a type of optical telescope that uses a lens as its objective to form an image
Photodetectors	sensors of light or other electromagnetic radiation
Photons	A type of elementary particle representing a quantum of light or other electromagnetic radiation

Raman's Equipment and Experimental Setup

Sir C. V. Raman with his instrument
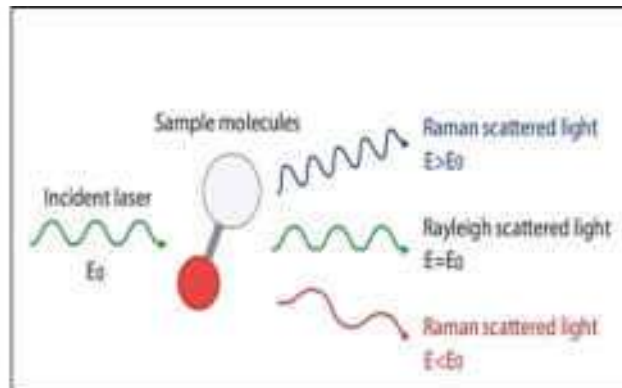
Scattering of light by molecules

The main challenge Raman faced in his experimental work was posed by the extremely weak intensity of the scattered light. In his early studies, Raman used a heliostat — a mechanically driven mirror that tracked the motion of the sun to provide a light source. Eventually, however, he came to realise that the sunlight was not sufficiently intense on its own. Thus, in 1927, he acquired a 7-in. refracting telescope, which he used in combination with a short-focus lens to condense the sunlight into a narrow beam. In the following year, he created an even more powerful light source by using highly monochromatic light from a mercury arc lamp together with a large aperture condenser and cobalt-glass filter. Sometimes, he replaced the glass filters with liquid ones. Raman used a violet filter to isolate a band of violet light incident on a sample liquid. At 90 degrees to the incident light, he placed another violet glass filter. This enabled him to observe violet light scattered from the sample, which represented normal Rayleigh scattering.

When he replaced the second filter with a green one, however, the Rayleigh- scattered light was blocked but there was still some green light visible, demonstrating the second form of scattering. Perhaps most interestingly, Raman used his own dark-adapted eyes as photodetectors. Only after he had observed the frequency shift with his

eyes and a direct-vision spectroscope did he repeat the observation with a mercury arc lamp and a Hilger baby quartz spectrograph. Surprising as it may seem, the human eye can detect single photons over a high dynamic range. Raman used a small Adam Hilger spectroscope for his initial studies, and he detected the spectrum of the scattered light using photography. Since the intensity of the frequency-shifted light was extremely weak, long exposure times were required to record the spectra.

Nobel Committee decided to give the Nobel Prize to Raman for his invention. He was awarded the Nobel Prize in Physics on December 11, 1930. He was a great man known for his driving ambition and passion for science. At the age of 60, Raman formed the Raman Research Institute (supported with his ~~own~~ funds and donations that he raised). He also remained a professor, as well as the President of the Indian Academy of Sciences in Bangalore, until his death in 1970. A few days before his death on November 21, 1970, Raman spoke these words, "Science can only flower out when there is an internal urge. It cannot thrive under external pressure." A tree grows where Raman died.

TASK 1 :Unscramble the following words

Sl. No.	SCRAMBLED	UNSCRAMBLED
	Naeoelcepsc	OPALESCENCE
1.	Ramanerdeetni	
2.	Oarcmlule	

3.	Ecuryfqen	
4.	Nucsereclfeo	
5.	Mmrocoichtnoa	
6.	Stenyinti	
7.	Rutpaere	
8.	Pcagpsrhoetr	
9.	Emurcyr	
10.	Ottecpsedohtro	

TASK 2: Locate related words from the passages

	Topic	Related Words
	Education	Physics, Universities, Oxford, Research, Institute, professor, Academy
	Places	India,
	Nature	Sea,
	Instruments	Telescope,
	Action words	Completed,
	Physics	

TASK 3: ~~Create~~ Write a sentence using each of the following words

Sl. No.	Word	Sentence
	Voyage	Sea voyages are interesting.
1.	Urge	
2.	Mystery	
3.	Discovery	
4.	Congress	
5.	Molecule	
6.	Demonstrate	
7.	Phenomenon	
8.	Narrow	
9.	Condense	
10.	Dynamic	

SOURCE PASSAGE: THE SOAP BUBBLE

Pre TASK : Key Terms

Iridescent	Iridescence is the phenomenon of certain surfaces that appear to gradually change colour as the angle of view or the angle of illumination changes

Refraction	The fact or phenomenon of light, radio waves, etc. being deflected in passing obliquely through the interface between one medium and another or through a medium of varying density
Interference	a phenomenon in which two waves superpose to form a resultant wave of greater, lower, or the same amplitude

Mean curvature	an extrinsic measure of curvature that comes from differential geometry and that locally describes the curvature of an embedded surface in some ambient space such as Euclidean space
Young–Laplace equation	a nonlinear partial differential equation that describes the capillary pressure difference sustained across the interface between two static fluids, such as water and air
Surface tension	the tendency of liquid surfaces to shrink into the minimum surface area possible
Concave surface	a surface that curves inward, or is thinner in the middle than on the edges
Convex surface	a surface that is having an outline or surface curved like the exterior of a circle or sphere or is thinner in the edges than in the middle

A soap bubble is an extremely thin film of soapy water enclosing the air that forms a hollow sphere with an iridescent surface. Soap bubbles usually last for only a few seconds before bursting, either on their own or on contact with another object. They are often used for children's enjoyment, but they are also used in artistic performances. Assembling several bubbles results in foam. When light shines onto a bubble it appears to change colour. Unlike those seen in a rainbow, which arise from differential refraction, the colours seen in a soap bubble arise from interference of light reflecting off the front and back surfaces of the thin soap film. Depending on the thickness of the film, different colours interfere constructively and destructively.

A Soap bubble

A single light soap bubble photograph taken under macro photography

A single soap bubble displaying three layers
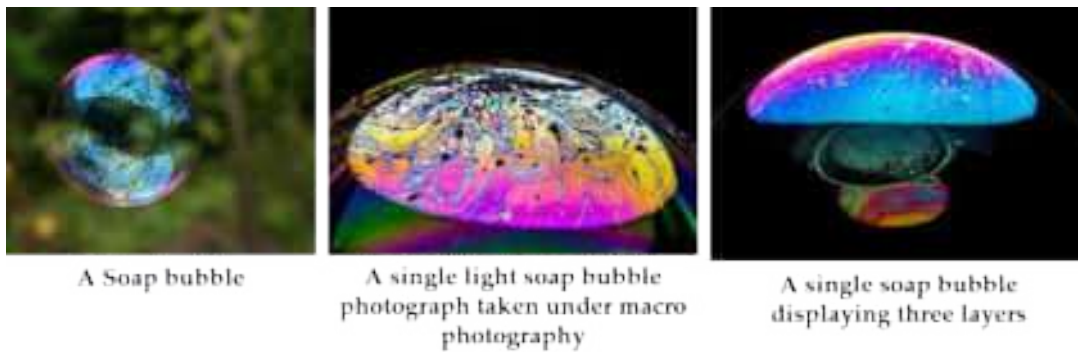
Mathematics

Soap bubbles are physical examples of the complex mathematical problem of minimal surface. They will assume the shape of least surface area possible containing a given volume. A true minimal surface is more properly illustrated by a soap film, which has equal pressure on inside as outside, hence becoming a surface with zero mean curvature. A soap bubble is a closed soap film: due to the difference in outside and inside pressure, it is a surface of *constant* mean curvature. While it has been known since 1884 that a spherical soap bubble is the least-area way of enclosing a given volume of air (a theorem of H. A. Schwarz), it was not until 2000 that it was proven that two merged soap bubbles provide the optimum way of enclosing two given volumes of air of different size with the least surface area.

Merging (Physics)

When two bubbles merge, they adopt a shape which makes the sum of their surface areas as small as possible, compatible with the volume of air each bubble encloses. If the bubbles are of equal size, their common wall is flat. If they aren't the same size, their common wall bulges into the larger bubble, since the smaller one has a higher internal pressure than the larger one, as predicted by the Young–Laplace equation. At a point where three or more bubbles meet, they arrange themselves out so that only three bubble walls meet along a line. Since the surface tension is the same in each of the three surfaces, the three angles between them must be equal to 120°. Only four bubble walls can meet at a point, with the lines where triplets of bubble

walls meet separated by $\cos^{-1}(-1/3) \approx 109.47°$. All these rules, known as Plateau's laws, determine how a foam is built from bubbles.

Stability

The longevity of a soap bubble is limited by the ease of rupture of the very thin layer of water which constitutes its surface, namely a micrometer-thick soap film. It is thus sensitive to:

- Drainage within the soap film: water falls down due to gravity. This can be slowed by increasing the water viscosity, for instance by adding glycerol. Still, there is an ultimate height limit, which is the capillary length, very high for soap bubbles: around 13 feet (4 meters). In principle, there is no limit in the length it can reach.

- Evaporation: This can be slowed by blowing bubbles in a wet atmosphere, or by adding some sugar to the water.

- Dirt and fat: When the bubble touches the ground, a wall, or our skin, it usually ruptures the soap film. This can be prevented by wetting these surfaces with water (preferably containing some soap).

Wetting

When a soap bubble is in contact with a solid or a liquid surface wetting is observed. On a solid surface, the contact angle of the bubble depends on the surface energy of the solid. A soap bubble has a larger contact angle on a solid surface displaying ultra-hydrophobicity than on a hydrophilic surface. On a liquid surface, the contact angle of the soap bubble depends on its size - smaller bubbles have lower contact angles.

Soap bubbles can easily merge

A soap bubble wetting an ultra hydrophobic surface

A soap bubble wetting a liquid surface

Medicine – Contact dermatitis

The composition of soap bubbles' liquid has many recipes with slightly different ingredients. The most common one contains 2/3 cup of dishwashing soap, 1 gallon of water, 2/3 tablespoon of glycerin. Because of the presence of dishwasher soap, it's not uncommon for children to contact dermatitis on face, hands with consequences as rashes, swelling of the eyes, vomiting and dizziness.

Freezing

If soap bubbles are blown into air that is below a temperature of −15 °C (5 °F), they will freeze when they touch a surface. The air inside will gradually diffuse out, causing the bubble to crumble under its own weight. At temperatures below about −25 °C (−13 °F), bubbles will freeze

Frozen soap bubble on snow

in the air and may shatter when hitting the ground. When a bubble is blown with warm air, the bubble will freeze to an almost perfect sphere at first, but when the warm air cools, and a reduction in volume occurs, there will be a partial collapse of the bubble. A bubble, created successfully at this low temperature, will always be rather small; it will freeze quickly and will shatter if increased further. Freezing of small soap bubbles happens within 2 seconds after setting on snow (at air temperature around −10...−14 °C).

TASK 1 :Read the text and find out who I am

Sl. No.	Hint	Who am I?
1.	I am an extremely thin film of soapy water.	Soap bubble

2.	I am a curved band of different colours that appears in the sky when the sun shines through rain.	
3.	I am a mass of small air bubbles on the surface of a liquid.	
4.	I am the process of a liquid changing or being changed into a gas.	
5.	I am the feeling that everything is spinning around you and that you are unable to balance.	

TASK 2: Locate the ANTONYMS of the following words from the text.

WORD	ANTONYM
Displeasure	enjoyment
unimaginative	
constructively	
Inconstant	
Drying	
instability	

I. Read to be Ready

Bubbles can be effectively used to teach and explore a wide variety of concepts to even young children. Flexibility, colour formation, reflective or mirrored surfaces, concave and convex surfaces, transparency, a variety of shapes (circle, square, triangle, sphere, cube, tetrahedron, and hexagon), elastic properties, and comparative sizing, as well as the more esoteric properties of bubbles listed on this page. Bubbles are

useful in teaching concepts starting from two years old and into college years. A bubble is made of transparent water enclosing transparent air. However, the soap film is as thin as the visible light wavelength, resulting in interferences. This creates iridescence which, together with the bubble's spherical shape and fragility, contributes to its magical effect on children and adults alike. Each colour is the result of varying thicknesses of soap bubble film. Adding coloured dye to bubble mixtures fails to produce coloured bubbles, because the dye attaches to the water molecules as opposed to the surfactant. Therefore, a colourless bubble forms with the dye falling to a point at the base.

	What are the scientific concepts you have learnt through soap bubbles?
	What have you understood of iridescence?
	Can you give examples of transparent elements other than water and air?
	What defines the different colours in the bubble?
	Do you like soap bubbles? If Yes, why? If NO, why not?

II. Frame 'Wh' Questions to the answers given below

	Answer: Foam
	Question: What is produced when assembling several soap bubbles?
1.	Ans: Soap bubbles lasts for a few seconds.
	Que:
2.	Ans: Interferences of different colours
	Que:

3.	Ans: constant mean curvature
	Que:
4.	Ans: When two bubbles merge
	Que:
5.	Ans: Evaporation
	Que:

III. Discuss answers for the following in pairs and write it down

1. If you are a soap bubble seller, how will you sell it effectively? Demonstrate.

2. Share your memorable experiences with soap bubbles from your childhood to the present.

3. Can you connect the characteristics of the soap bubble with any other object? Present it effectively

SOURCE PASSAGE :"TOO BAD!": AN INTRODUCTION TO ROBOTICS AND ARTIFICIAL INTELLIGENCE

Key Terms

Miniaturization	Size reduction
Radiation therapy	a therapy using ionizing radiation, generally as part of cancer treatment to control or kill malignant cells
Planck's constant	a quantum of electromagnetic action that relates a photon's energy to its frequency

Quantum mechanics	a fundamental theory in physics, which describes the physical properties of nature on an atomic scale
Pinheaded	a form of electrical connector
Anthropomorphism	the attribution of human traits, emotions, or intentions to non- human entities
Quanta	the plural form of quantum. In physics, a quantum is the minimum amount of any physical entity involved in an interaction.
Brownian motion	the random motion of particles suspended in a fluid (a liquid or a gas) resulting from their collision with the fast-moving molecules in the fluid
Electron	a subatomic particle, whose electric charge is negative one elementary charge
Laser beam	a device that emits light through a process of optical amplification based on the stimulated emission of electromagnetic radiation. The term "laser" originated as an acronym for "light amplification by stimulated emission of radiation"
Recoil	the backward movement of a gun when it is discharged (often called knockback, kickback or simply kick)

THE THREE LAWS OF ROBOTICS

1. A robot may not injure a human being or, through inaction, allow a human being to come to harm.

2. A robot must obey the orders given it by human beings except where that would conflict with the First Law.

3. A robot must protect its own existence as long as such protection does not conflict with the First or Second Law.

Dr.Gregory Arnfeld is a robotic scientist, living in the twenty second century. He is an expert in miniaturisation. He suffers inoperable cancer and refuses any chemical treatment or radiation therapy. Arnfeld believes that his robotic invention Mike, a microbat, can cure him better than any other treatments. His wife Tertia reminds him that there are a lot of ways to cure cancer in the twenty second century that they live in. But he reassures, "Yes, but Mike is one of them, and I think the best." Tertia retaliates, "how certain are you of miniaturization? That's an even newer technique than robotics." Arnfeld replies, "The miniaturisation boys can reduce or restore Planck's constant in a reasonably precise manner, and those controls are built into Mike. He can make himself smaller or larger without affecting his surroundings." Arnfeld is proud of this experiment, as his name will be engraved in the history as the principal designer of Mike. But he says, "My greatest feat will be that of having been successfully treated by a minirobot—by my own choice, by my own initiative." "It's dangerous," says Tertia, his wife. He responds, "There's danger to everything. Chemicals and radiation have their side effects." He is happy that even if it fails, it will be a glorious experiment.

When Tertia wants to have more clarity on what is to happen, Louis Secundo, of the miniaturization group, says, "We can't guarantee success. Miniaturization is intimately involved with quantum mechanics, and there is a strong element of unpredictability. As MIK-27 reduces his size, there is always the chance that a sudden unplanned re-expansion will take place, naturally killing the patient. The greater the

reduction in size and the tinier the robot becomes, the greater the chance of re-expansion. And once he starts expanding again, the chance of a sudden accelerated burst is even higher. The re-expansion is the really dangerous part." When Tertia enquires about the risk level, Secundo says, "The chances are it won't, Mrs. Arnfeld. But the chance is never zero." "What if Mike makes a mistake or reduces himself too far because of a glitch in the mechanism? Then re-expansion would be certain, wouldn't it?" asks Tertia. He replies, "It remains statistical. The chances improve if he gets too small. But then the smaller he gets, the less massive he is, and at some critical point, Mike will become so insignificant and the programme will send him flying off at nearly the speed of light." Anxious Tertia asks, "Well, won't that kill the doctor?" The scientist assures, "No. By that time, Mike would be so small he would slip between the atoms of the doctor's body without affecting them." Mike would re-expand within seconds, but by the time he re-expanded, he would be a hundred thousand miles away in outer space and the explosion that results would merely produce a small burst of gamma rays for the astronomers to puzzle over. In addition, MIK-27 will have his instructions and he will not reduce himself to smaller than the size needed to carry out his mission.

It is coincidental and surprising that the chief designer of Mike, the Microbot, becomes his first patient. Mrs. Arnfeld discloses to the media that the present condition of Dr. Arnfeld is the result of a predisposition and there have been others in his family who have had it. For this reason, they have no children and Dr. Arnfeld devotes his life to produce a robot that is capable of miniaturisation.

Ben Johannes, a co-worker with Dr. Arnfeld for five years, takes Mrs. Arnfeld to the robot's quarters. Mike says, in his curiously neutral voice, which is smoothly average to be quite human, "I am pleased to see you, Mrs. Arnfeld." Mrs. Arnfeld had seen Mike soon after his construction, when he was undergoing the primary tests, and Mike remembered her. He is not a well-shaped robot. He looks pinheaded and very bottom heavy. He was almost conical. Mrs. Arnfeld knows that it is because his miniaturization mechanism is bulky and abdominal and because his brain has to be abdominal as well in order to increase the speed of response. It is an unnecessary anthropomorphism to insist on a brain behind a tall cranium, her husband had explained. Yet it makes Mike seem ridiculous, almost moronic. He represents the psychological

advantages to anthropomorphism too. When Mrs. Arnfeld ask whether he has understood the task, he says, "I will see to it that every vestige of cancer is removed." Mike has the ability to recognise a cancer cell when he is at the proper size. He can quickly destroy the nucleus of any cell that is not normal. He further says proudly, "I am laser equipped, Mrs. Arnfeld." Mrs. Arnfeld is still not convinced and she continues to question, "How long will it take to get them one by one?" Johannes intervenes and tells, "Even though the cancer is widespread, it exists in clumps. Mike is equipped to burn off and close capillaries leading to the clump, and a million cells could die at a stroke in that fashion. He will only occasionally have to deal with cells on an individual basis."

Johannes further informs that this process would take hours and every next moment will increase the chance of re-expansion. But Mike confidently guarantees, "Mrs. Arnfeld, I will labor to prevent re-expansion. By monitoring my size and making an effort to keep it constant, I can minimize the random changes that might lead to a re- expansion. Naturally, it is almost impossible to do this when I am actually re-expanding under controlled conditions." Understanding the danger involved, Mrs. Arnfeld expresses her anxiety regarding the safety of her husband and Mike says solemnly, "The laws of robotics ensure that I will, Mrs. Arnfeld." Johannes further comforts that there is a holosonogram and a detailed cat scan of the area. Mike knows the precise location of every significant cancerous lesion. Most of his time will be spent searching for small lesions undetectable by instruments. Mike is strictly instructed as to how small to get and he will not get smaller beyond that. As a microbot, he obeys orders. Johannes explains the re-expansion process, "Tertia, we're in the lap of the quanta. There is a more reasonable chance that he will get out without trouble. Naturally, we will have him re-expand within Gregory's body as little as possible – just enough to make us reasonably certain we can find and extract him. He will then be rushed to the safe room where the rest of the re-expansion will take place."

The observation room is underground and half-a-mile away from the viewing room. There are three miniaturists working on this experiment. If anything untoward happens, that will take the lives of the three miniaturists as well. So the miniaturists are very careful in handling this procedure. From the observation room, Mrs. Arnfeld

watches the miniaturisation procedure and sees Mike growing smaller and disappear. She sees the procedure of injecting Mike into the body of Dr. Arnfeld and his movement through his tissues by way of his bloodstream. Every move is captured and shown in holosonogram, which is a three-dimensional representation, cloudy and unfocused, made imprecise through a combination of the finite size of the sound waves and the effects of Brownian motion. Mrs. Arnfeld reaches a stage where she could not hold it further. She is sedated and she slept until evening. When she wakes up, Johannes is near her and she reveals the happy news, "Success, Tertia. Complete success. Your husband is cured. We can't stop the cancer from recurring, but for now he is cured."

After two days, she is able to meet and talk to her husband Dr. Arnfeld. She says happily, "They can't find a trace of cancer in you." But he says, "Well, we can't be too confident about that. There may be a cancerous cell here and there, but perhaps my immune system will handle it, especially with the proper medication, and if it ever builds up again, which might well take years, we'll call on Mike again." On saying this, he wants to see and thank Mike for the wonderful thing that he has done for his life. There Mrs. Arnfeld reveals the news, "Actually, dear, Mike is not available." Shocked Dr. Arnfeld asks, "Not available! Why not?" His wife replies, "He had to make a choice, you see. He had cleaned up your tissues marvellously well; he had done a magnificent job, everyone agrees; and then he had to undergo re-expansion. That was the risky part. Mike decided to minimize the risk. he decided to make himself smaller." Unbelievingly he cries, "What! He couldn't. He was ordered not to." But the wife says, "That was Second Law, Greg. First Law took precedence. He wanted to make certain your life would be saved. He was equipped to control his own size, so he made himself smaller as rapidly as he could, and when he was far less massive than an electron he used his laser beam, which was by then too tiny to hurt anything in your body, and the recoil sent him flying away at nearly the speed of light. He exploded in the outer space. The gamma rays were detected." Dr. Arnfeld stares at her and says, "But I didn't want that. I wanted him safe for further work. My life was less important than his." "Not to me, dear. Not to those who work with you. Not to anyone. Not even to Mike," says his wife putting her hands out to him. Pushing aside her hands, he says, "You don't understand. Oh, too bad. Too bad!"

– Abridged version of the short story "Too Bad" by Isaac Asimov

Isaac Asimov

Isaac Asimov is a remarkable American figure in science fiction. He is a writer and Biochemist. He is a prolific writer of science fiction and science books. He has edited or wrote more than 500 volumes. He is known for his *Foundation* and *Robot* Series. He became popular with his short story "Nightfall" (1941), which talks of a planet in a multiple-star system which experiences darkness only one night in every 2049 years. This short story brought him to the forefront among the science fiction writers and it is considered as one of the best short stories of this genre. He developed a set of ethics for robots and rejected the idea that robots are marauding metal monsters, which changed the way the subject was treated by other writers. Using the pseudonym Paul French, he wrote science stories for children in the series *Lucky Starr* (1952-58), each volume of this series took place on a different world of the solar system.

Source: https://www.britannica.com/biography/Isaac-Asimov

I. Find the missing letters and write the word

	r	a	d	i	a	t	i	o	u	Radiation
1	q			a	n		u			
2	a		r		n	m			s	
3		n	h	o	o	o		h	s	
4		o		o		o		o	a	
5	c			a			i	u		

II. Fill the following blanks with suitable words (not from the text)

Dr. Gregory Arnfeld suffers _____ cancer and _____ any chemical treatment or radiation _____. Arnfeld believes that his robotic _____ Mike can _____ him better than any other _____. His wife Tertia reminds him that there are a lot of ways to _____ cancer. But he _____, "Yes, but Mike is one of them, and I think the _____." Tertia _____, "how _____ are you of miniaturization? That's an even newer _____ than robotics." Arnfeld replies, "The

miniaturisation boys can reduce or _____ Planck's constant in a reasonably _____ manner, and those controls are _____ into Mike. He can make himself smaller or larger without _____ his surroundings." Arnfeld is _____ of this experiment, as his name will be _____ in the history as the principal _____ of Mike. But he says, "My greatest _____ will be that of having been successfully _____ by a minirobot—by my own choice, by my own _____." "It's _____," says Tertia, his wife.

III.   Read to be Ready (Read the passage aloud and take notes)

ARTIFICIAL INTELLIGENCE

Artificial intelligence (AI) refers to the simulation of human intelligence in machines that are programmed to think like humans and mimic their actions. The term may also be applied to any machine that exhibits traits associated with a human mind such as learning and problem-solving. The ideal characteristic of artificial intelligence is its ability to rationalize and take actions that have the best chance of achieving a specific goal. When most people hear the term artificial intelligence, the first thing they usually think of is robots. That's because big-budget films and novels weave stories about human-like machines that wreak havoc on Earth. Artificial intelligence is based on the principle that human intelligence can be defined in a way that a machine can easily mimic it and execute tasks, from the most simple to those that are even more complex. The goals of artificial intelligence include learning, reasoning, and perception. The applications for artificial intelligence are endless. The technology can be applied to many different sectors and industries. AI is being tested and used in the healthcare industry for dosing drugs and different treatment in patients, and for surgical procedures in the operating room. Other examples of machines with artificial intelligence include computers that play chess and self-driving cars. Weak AI tends to be simple and single-task oriented, while strong AI carries on tasks that are more complex and human-like.

1. What are the goals of artificial intelligence?

2. What is artificial intelligence based on?

3. Which are the sectors that use AI in the present?

4. Define weak and strong AI.

5. Do you think it is a good idea to programme human intelligence in machines? If so, what are the traits that can be programmed?

Explore the Text

1. Why did Greg refuse chemical and radiation therapy?

2. Why is re-expansion considered dangerous?

3. Why did Mike disobey the instruction programmed in him?

4. Was Johannes supportive to Mrs. Arnfeld?

5. What is the safe room used for?

IV. **Discuss the following questions and put forth your ideas to the class**

1. Are we becoming too dependent on robots? Justify your answer

2. Can Artificial Intelligence replace human intelligence? State reasons.

3. Do you think creating robots with human thinking skills is a good idea?

4. If you get a chance to change the climax of the story, would you save Mike or Greg or both or neither?

5. What kind of robot will you create in future if you get a chance? Why?

Biomass and Biofuels

Fuels in use today, like coal and oil, are made from fossils, plants, and animals which died thousands of years ago. Biofuels are fuels made from crops which have just been harvested and from biomass, which contains chemical energy stored from the sun. **Biofuel** (also called agrofuel) is an abbreviation for bio-organic fuel. It describes any plant or animal which can burn and be used for fuel.

Trucks, cars, and busses and other vehicles used for transportation need clean-burning fuels. They have internal combustion engines. The fuel in a liquid state is more portable and easily pumped. Petroleum is used today. It is a **fossil fuel**. Coal and wood are also, used for energy but produce much more pollution in the atmosphere. They are fossil fuels too, made from dead plants and animals of long ago. Wood and its byproducts can now be converted into biofuels such as wood gas, methanol or ethanol fuel.

The goal for all the production of energy is to turn away from the use of fossil fuels. **Biomass** from which biofuel is made includes products like wood, sugar cane, manure and waste from agriculture. Biomass is a storehouse of the sun's energy. If it is handled wisely, more will be produced indefinitely. Fossil fuels may at some point run out. Chlorophyll from plants takes carbon dioxide from the air and combines it with water to form carbohydrates. When these carbohydrates are burned, they release the stored energy.

However, recent discoveries have shown that there is a more efficient way to get energy from biomass rather than burning it. It can be turned into liquid fuels or heated to produce gases which will burn. Willow trees and willow grass are grown specifically to be used to produce energy. Some plants can be grown only for producing energy. Energy can be found also in the by-products or waste products from plants used for other purposes. The products used for energy purposes vary from region to region depending on climate and other conditions.

Power crops which produce energy directly can be grown on large farms. Trees and grasses are the most readily available, although corn is starting to be used. Some trees may grow back very quickly after being cut down to the ground. This process is called **coppicing**. They can be harvested every three to eight years. They can grow as much as forty feet in that space of time. Poplar, willow and black locust, which grow in the cool, wet areas of the northern states, are the best choice for **'short-rotation woody crops'** there. Sycamore and sweet gum trees are used in the warm Southeast. Eucalyptus accomplishes the purpose in Florida and California.

Corn and sorghum are grown mainly for food, but in the United States corn provides most of the liquid biofuel. However, because it must be planted, fertilized and harvested every year, it is not the best source for biofuels. Soybeans and sunflowers produce oil which can be used to make biofuel. However, just like corn, much maintenance is required each year to produce a crop of soybeans and sunflowers. **Microalgae** is another type of crop with oil. This may have the potential for the future of biofuel.

For many years, the way to produce energy from biofuels has been to burn it. However, during this process, energy can be lost or wasted, and some pollution can occur. A new process called **'co-firing'** now is being used. Coal is mixed with up to twenty percent of a biomass product in a boiler in a power plant. Operating costs will be lower, less pollution will occur, and energy will be saved. In Iowa, the Department of Energy and a local energy company have begun using switchgrass to substitute for a certain percentage of the coal. The project has worked well. Biomass can also be used to substitute for petroleum in many other products.

Source : https://www.softschools.com/

Read the above passage and answer the questions given below

State whether the following sentences are TRUE or FALSE

1. Biomass contains solar energy.
2. Grass is not used to make biofuel.
3. Wood is both a fossil fuel and a biofuel

Fill in the blanks with the correct word from the passage

1. Biofuels are converted into energy by the process of _____.
2. ._____ can be used as an alternative to petroleum in many products.
3. ._____ is a power crop that is easily available.

Write a sentence describing the given words from the context of the passage

1. Potential

2. Accomplishes

3. Substitute

4. Efficient

Write a short paragraph detailing the similarities and differences between Biomass and biofuels

UNIT 4

SOURCE PASSAGE-1: THE MYSTERY OF THE BLACK HOLE

Pre Reading: Vocabulary Enrichment

New words and concepts

Gravity- a force of attraction that exists between any two masses

Relativity-the notion that the laws of physics are the same everywhere

Principle- a general scientific theorem or law

ultimate- being the best

phenomenon- a fact or an event in nature, which is not fully understood

A black hole comes from the death of a large star (at least 10 times bigger than our Sun) exploding at the end of its life in a supernova. The Sun, being too small, won't ever become a black hole, it will expand, contract and cool off in its death process. This is a simple explanation of what a black hole is and how astronomers identify them. The constant fusion of hydrogen to helium creates the energy and radiation from a star. A star is in a stable state for most of its life as the energy pushing out from the star balances with the gravitational force pulling in.

At the end of a star's life, stars like our Sun will continue fusing elements together like helium to carbon, carbon to neon, but not much further. Large stars will continue fusing elements until the star reaches iron. Iron is a very stable element, and gravity alone cannot compress it further. Iron builds up in the core, and the internal pressure of energy radiating outwards becomes out of balance with the pressure of gravity pulling inwards. The outer layers of the star are no longer supported by the radiation pressure of nuclear fusion, and the star's gravity pulls the outer layers into the core. When the incompressible core connects with the outer layers, a shockwave is sent through the densely packed star, which results in the fusion of other elements on the periodic table after iron.

Now the energy being released overwhelms the pressure of gravity, and the collapsing star explodes in a supernova, the largest explosion known. The lighter outer layers are flung off into space, and the remaining core can create a black hole. A black hole has so much mass tightly packed into a small space that, close up, its gravity is so strong that nothing nearby can escape it. To get away from a black hole, you'd have to travel faster than the speed of light, which isn't possible. The Cygnus X-1 black hole formed when a large star caved in. It is pulling matter from the nearby blue star.

Astronomers observe black holes by watching the light from stars in the background warp as the gravity of the black hole pulls on the light. They also observe stars as they cross the 'event horizon' (the point of no return) and the radiation emitting from the black hole. But not everything gets pulled into the black hole. There is an orbital pattern to objects near some black holes. They get close to the black hole and then are 'flung' out again.

The 'black' part of the black hole is the event horizon. If an object breaches the event horizon and approaches the singularity it will become 'spaghettified' – stretched and pulled apart by the black hole's gravitational forces. Scientists think that in the middle of the black hole is a 'singularity'. It's

at this point in the black hole discussion that classical physics principles can no longer be applied (it stops making sense in this context) and quantum mechanics takes over. The theory is that the singularity is an infinitely small point where gravity and density are also infinite. The black hole is packed with all the heavy elements from the star but in a much smaller space. Imagine the mass of a star 10 times the size of our Sun compressed into something the size of a city.

Black holes are fascinating because there is so much we don't know. It's an area ripe for investigation, and NASA is doing just that. There is a NASA campaign under way that aims to understand black holes further. From 5–14 April, astronomers used a network of radio telescopes to look at the gigantic Sagittarius A* black hole located at the centre of   our galaxy. These telescopes were all pointing towards Sagittarius A* and worked together to create the first photo of a black hole. The data from the radio telescopes will be converted into an image. At the time of writing this article, the photo had not been released.

TASK 1 Answer the following questions

- How are black holes formed?
  .……………………………………………………………………………….

- How do you observe black holes?
  …………………………………………………………………………………..

- Explain the Cygnus X-1 black hole.
  …………………………………………………………………………………

- What is Spaghettification?
  …………………………………………………………………………………..

TASK 2 Reading Activity
Match the two columns (Refer Para No: 5)

| PART A | PART B |

1	A
The 'black' part of the black hole is	It will become

2	B
If an object breaches the event horizon	The event horizon

3	C
In the middle of the black hole	In a much smaller pace

4	D
'Spaghettified'	Is a singularity

5	E
Black hole packed with all the heavy elements	Stretched and pulled apart by the black hole's gravitational forces

TASK 3: Writing

Write a summary of the text on the mystery of black holes

SOURCE PASSAGE-II: GRAVITY

Pre Reading: Vocabulary Enrichment

Gravitational Lensing	Phenomena
Thunderstorms	Electrical Discharges
Gravity	Earth Function Properly
Silicon	Manufacture in Transistor
Copernicus	Earth was not the focal point of the Universe
Ionization	Diminish during the Overshadowing

GRAVITY:

Sir Isaac Newton was a physicist and mathematician who discovered the gravity of nature's powers while researching. An apple inadvertently fell on his head as he was lightening up under the oak. He began to question at that moment about the natural force that drew the apple toward the ground. He assumed this is the force that keeps the moon on its orbit and helps the earth function properly. He called that force 'gravity' and he explained the gravity influence on all objects.

Falling of objects downwards is due to Earth's gravity.

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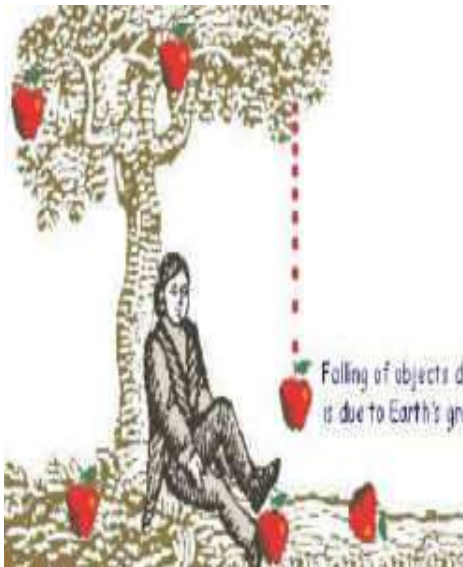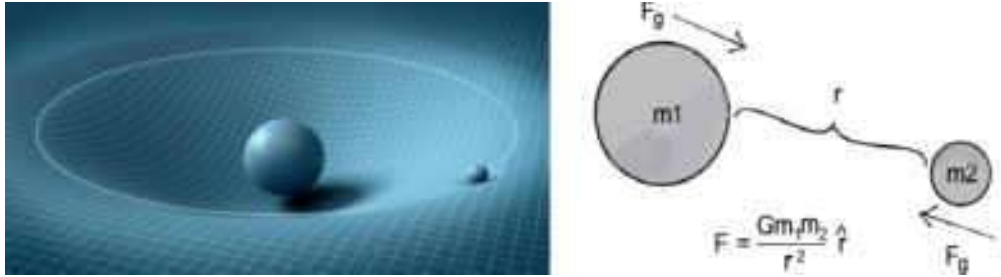
Universe formation extends beyond human rationality, creativity, and imagination. Understanding how it (universe) functions, moves and changes over time is subtle. In the past, the celebrated scientists made an outstanding effort to explain the universe, and yet it persists in the present. Isaac Newton is the first person to think about Gravity and everyone knows an apple is falling from the tree. The advent of the 'Gravity Theory' has stated that gravity influences everything in the universe. Consequently, in his "The Treatise of Human Nature," David Hume is another man who believed that 'scientific concepts should be based on experience and evidence rather than on reason alone.' He also indicated that time doesn't occur separately from object movement.

These philosophers lead to the study of relativity, Einstein himself wrote, "It is very possible that I would not have arrived at this solution without these philosophical studies." As a result of these ideas Albert Einstein has developed a new theory on two principles. First he said, 'for all observers, the laws of physics appear the same. Secondly, he calculated the speed of light remaining unchanged. The ultimate formation of relativity theory has emerged and he said time-space is one continuum; therefore, time and space cannot be separated from each other. For this Einstein describes that gravity falls in relative terms. Hence he said gravity bends light and the mathematical phenomena called 'Gravitational Lensing' emerges there.

TASK 1 Answer the questions given below

    1.How did Newton identify the gravitational force

    …………………………………………..

    2.Explain the functionality of gravitational force with examples.

    ………………………………………….

TASK 2 Writing Activity: Write five sentences about the significance of Newton's theory in Physics.

……..……………………………………………………………………………….

……..…………………………………………………………………………………

……………………………………………………………………………………

……………………………………………………………………………………

……………………………………………………………………………………..

<div align="center">

SOURCE PASSAGE-III: COSMIC RAYS

Pre Reading: Vocabulary Enrichment

</div>

Inflatable – capable of being filled with air

Hypothesis - a proposed explanation for a phenomenon

Abatement – the action of subsiding

Obscuration –the action of hiding something

Overshadowing - to cover something Contemplate – to think

In 1911 and 1912 Austrian physicist Victor Hess made a progression of risings in an **inflatable** to take estimations of radiation in the climate. He was searching for the wellspring of an ionizing radiation that enrolled on an electroscope – the common **hypothesis** was that the radiation originated from the stones of the Earth. To test the hypothesis, in 1909 German researcher Theodor Wulf estimated the pace of ionization

close to the highest point of the Eiffel tower (at a stature of around 300 meters) utilizing a convenient electroscope. Despite the fact that he expected the ionization rate to diminish with stature, Wulf noticed that the ionization rate at the top was simply under a large portion of that at ground level – a substantially less huge **abatement** than foreseen.

Victor Hess' inflatable flights took such estimations further. In 1911 his inflatable arrived at a height of around 1100 meters, however Hess found "no fundamental change" in the measure of radiation contrasted and ground level. At that point, on 7 April 1912, Hess made a rising to 5300 meters during a close complete **obscuration** of the Sun. Since ionization of the air didn't diminish during the **overshadowing**, he **contemplated** that the wellspring of the radiation couldn't be the Sun it must be originating from farther in space. High in the air, Hess had found a characteristic **wellspring** of high-vitality particles: inestimable beams.

TASK 1: LISTENING:

❖ In this activity, the learners will listen to the passage carefully read by the teacher.

❖ Then they have to describe the facts or the content of the source text

❖ The instructor may ask some questions to test the listening skill of the students

❖ Listen carefully and answer the questions

TASK 2:
1. Who invented Cosmic Rays?
2. Write down the technical words that were used in the paragraph.

SOURCE PASSAGE-IV:
Kalpana Chawla: Biography & Columbia Disaster

New words and concepts

Immigration- action of coming to live permanently in a foreign country

Deployed- move or equipment into position for military action

Malfunction- failure to function normally

depressurized- release the pressure of the gas inside a pressurized vehicle

Astronaut- a person who is trained to travel in a spacecraft

Shuttle- a spacecraft used to make repeated journeys between the Earth and space

Insulation- material used to retain the heat of an object

Plunge-dive nose down

The tragic loss of the space shuttle Columbia killed seven astronauts. One of those, Kalpana Chawla, was the first Indian-born woman in space.

Born in Karnal, India, on July 1, 1961, Chawla was the youngest of four children. The name Kalpana means "idea" or "imagination." Her full name is pronounced *CULL-puh-na CHAV-la*, though she often went by the nickname K.C.

Chawla obtained a degree in aeronautical engineering from Punjab Engineering College before immigrating to the United States and becoming a naturalized citizen in the 1980s. She earned a doctorate in aerospace engineering from the University of Colorado in 1988, having previously obtained her masters degree from the University of Texas. She began working at NASA's Ames Research Center the same year, working on power-lift computational fluid dynamics.

In 1994, Chawla was selected as an astronaut candidate. After a year of training, she became a crew representative for the Astronaut Office EVA/Robotics and Computer Branches, where she worked with Robotic Situational Awareness Displays and tested software for the space shuttles.

Chawla's first opportunity to fly in space came in November 1997, aboard the space shuttle Columbia on flight STS-87. The shuttle made 252 orbits of the

Earth in just over two weeks. The shuttle carried a number of experiments and observing tools on its trip, including a Spartan satellite, which Chawla deployed from the shuttle. The satellite, which studied the outer layer of the sun, malfunctioned due to software errors, and two other astronauts from the shuttle had to perform a spacewalk to recapture it.

Disaster strikes

In 2000, Chawla was selected for her second voyage into space, serving again as a mission specialist on STS-107. The mission was delayed several times, and finally launched in 2003. Over the course of the 16-day flight, the crew completed more than 80 experiments.

On the morning of Feb. 1, 2003, the space shuttle returned to Earth, intending to land at Kennedy Space Centre. At launch, a briefcase-sized piece of insulation had broken off and damaged the thermal protection system of the shuttle's wing, the shield that protects it from heat during re-entry. As the shuttle passed through the atmosphere, hot gas streaming into the wing caused it to break up. The unstable craft rolled and bucked, pitching the astronauts about. Less than a minute passed before the ship depressurized, killing the crew. The shuttle broke up over Texas and Louisiana before plunging into the ground. The accident was the second major disaster for the space shuttle program, following the 1986 explosion of the shuttle Challenger.

The entire crew of seven was killed. In addition to Chawla, the crew included:
• Commander Rick D. Husband
• Pilot William C. McCool
• Payload Commander Michael P. Anderson
• Payload Specialist Ilan Ramon, the first Israeli astronaut
• Mission Specialists David M. Brown and Laurel B. Clark
Over the course of her two missions, Chawla logged 30 days, 14 hours, and 54 minutes in space. After her first launch, she said, "When you look at the stars and the galaxy, you feel that you are not just from any particular piece of land, but from the solar system."

Chawla's legacy

The events of Columbia have been officially investigated and reported on to understand what happened and how to prevent the tragedy from re-occurring in future spaceflights. Examples include the Columbia Accident Investigation Board (2003) NASA's Columbia Crew Survival Investigation Report (released in 2008).

Several documentaries have been produced about the Columbia crew. Some examples include "Astronaut Diaries: Remembering the Columbia Shuttle Crew" (2005), and one that focused on Ilan Ramon, called "Space Shuttle Columbia: Mission of Hope" (2013).

The University of Texas dedicated a Kalpana Chawla memorial at the Arlington College of Engineering in 2010. At the time of its opening, the display included a flight suit, photographs, information about Chawla's life, and a flag that was flown over the Johnson Space Center during a memorial for the Columbia astronauts.

There have been several rumors about films in production concerning Chawla's life, including a rumour in 2017 that had the actress Priyanka Chopra (known for Baywatch and Quantico, as well as Bollywood films) attached to it. But in a Quora discussion in 2017, Chawla's husband — Jean-Pierre Harrison — said: "Until I issue a public statement confirming my participation in such a project, take it for granted that I have not signed any agreement nor licensed any rights necessary to produce such a movie."

Additional reporting by Elizabeth Howell, Space.com contributor

https://www.space.com/17056-kalpana-chawla-biography.html

TASK 1 Write a summary of the above passage in about 50 to 60 words

TASK 2 Read the passage and answer the questions given below

1. Write any 3 achievements of Kalpana Chawla
2. What were the documentaries produced about the Columbian Crew?
3. What were the two major disasters of the space shuttle program?
4. Give two chief causes for the 2003 disaster
5. How was Kalpana Chawla honoured by the University of Texas?

SOURCE PASSAGE V: THE INVINCIBLE π
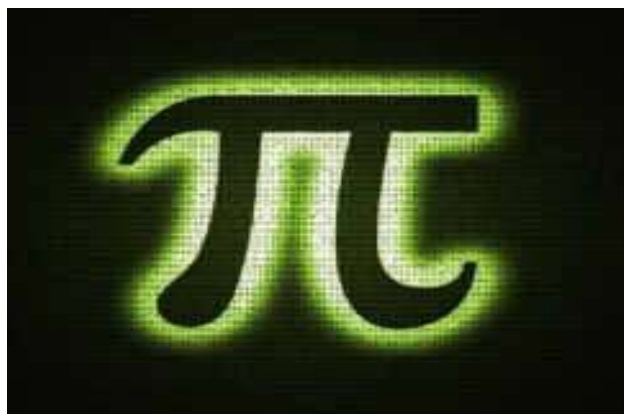
Pre Reading: Vocabulary Enrichment

Perimeter = Outer limits (C=2πr)

Egyptologist - Any archaeologist, historian, linguist, or art historian who specializes in Egyptology, the scientific study of Ancient Egypt and its antiquities.

The significance of pi has been felt for at least 4,000 years. It is not easy to determine exactly who first discovered the constant ration between the circumference of a circle and its diameter though this idea was conceptualized by the early human civilization even early as 2550 BC in the invention of the Wheel.

The Great Pyramid of Egypt which was built between 2550 and 2500 BC, whose perimeter is calculated approximately as 2 times pi. Though archaeologists and Egyptologists believe that these measurements were chosen for symbolic significance, one cannot ignore its usage entirely.

The textual reference to pi dates back to 1900 BC. Both the Babylonians and Egyptians assessed the value of pi to be about roughly around 25/8 (3.125), and 256/81 (3. 16) respectively. But, the undisputed credit of calculating the accurate value of pi that lies between 3.1408 and 3.14285, goes the Ancient Greek mathematician Archimedes (287-212 BC). He arrived at this this by finding the areas of two polygons: the polygon that was inscribed inside a circle, and the polygon in which a circle was circumscribed.

Chinese mathematician Zhu Chongzhi (AD 429-500) used an identical method to estimate the value of pi as 355/113.

In the 15th century, Indian mathematician Madhavan of Sangamagramam discovered the much celebrated Madhava-Leibniz series (named after German mathematician Gottfried Leibniz, who rediscovered the series in the 17th century), an infinite series that converges to four. Later, Madhavan calculated pi to 11 decimal places. Aryabhatta calculated the circumference of the earth and used Pi= 22/7 as constant in the calculation around 5th century BC.

Subsequently, in 1707, a Welsh mathematician William Jones first used the Greek letter pi (π) to denote the constant ratio. This Greek letter, which meant 'perimeter' in Greek, was popularized by a Swiss mathematician, Leonhard Euler.

In 1945, it was D. F. Ferguson, who calculated the value of pi to 620 digits which was the most accurate calculation even before the advent of the computer. Ferguson's accuracy grew by leaps and bounds with the aid of computer, which extended to 206,158,430,000 digits in 1999. By using Alexander Yee's y-cruncher program, in 2011, Shigeru Kondo created a record by accomplishing the longest calculation of pi to 10 trillion digits.

In the present times, the value of pi in decimal form, is approximately 3.14. But pi is an irrational number, meaning that its decimal form neither ends (like 1/4 = 0.25) nor becomes repetitive like 1/6 = 0.166666... So, the value of pi is restricted to only 18 decimal places, thus pi is 3.141592653589793238.)

TASK 1 Read the passage and answer the questions given below

1. List out the names of Mathematicians mentioned in the given passage while tracing the growth of pi.

2. How did Archimedes calculate the value of pi?

3. Name the invention which is closely associated with pi?

4. What is meaning of pi in Greek?

5. What is the longest calculation achieved with the aid of computer program?

Task 2: Discuss in pairs and choose the correct answer

1. When is Pi Day celebrated around the world?
   A. 14 Feb   B. 14 March   C. 14 April D. 15 March

2. What is the value of Pi?
   A. 3.14159   B. 3.14358 C. 3.14258 D. 3.14289

3. Which of the following statement is correct about Pi?
   A. It is non-repeating decimal value
   B. It is non-terminating decimal value
   C. It is repeating and terminating decimal value
   D. It is non-repeating, non-terminating decimal value

4. Who has calculated the circumference of the earth and considered the value of Pi = 22/7?
  A. Archimedes   B. John Machin's C. Aryabhata D. None of the above

5. Who was the first to use the Greek letter pi (π) to denote the constant?
  A.   Leonhard Euler B. William Jones C. Mayans   D. Papyrus

TASK 3: Interpret the given pie-chart and answer the questions below

The pie-chart below provides the names of the states with the highest number of employed children (in lakhs).

1. Which state has the largest number of children working in it?

2. How many children in Tamil Nadu are child labourers?

3. Name three states that are not mentioned in the pie-chart and have a lower percentage of child labour.

4. Which state has 2.49 lakh children working as child labourers?

5. Name two states that have less than 1 lakh working children.

Child Labour Statistics, India
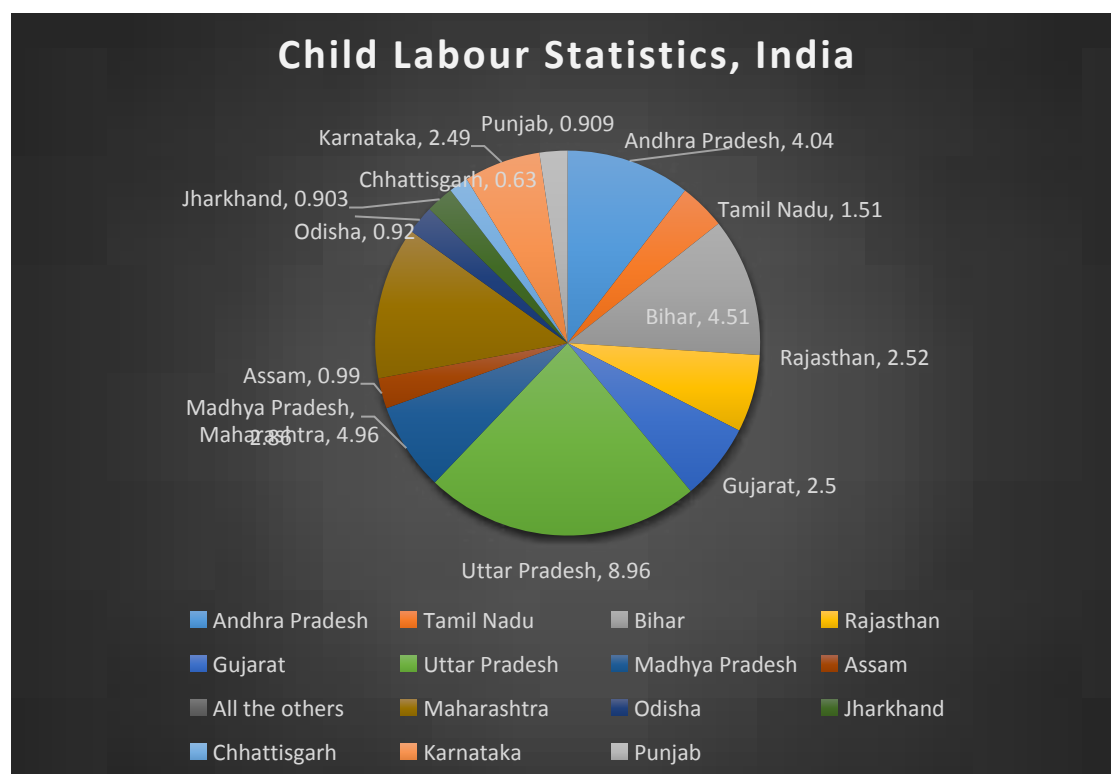
Data Source: Census, 2011
References: https://labour.gov.in/childlabour/census-data-child-labour

SOURCE PASSAGE VI -HISTORY OF RADIO

Pre Reading: Vocabulary Enrichment

Portable – able to be easily carried

Broadcast- the act of transmitting sound or images by radio or television

Compete- strive to gain or win something by defeating or establishing superiority over others

The development of the telegraph and the telephone led eventually to the search for a way to communicate without wires. In 1865, James Clerk Maxwell thought that such communication could be possible through a layer of the atmosphere called the ether. In 1888, A German, Heinrich Hertz, proved that this theory was correct. He transmitted a wireless code signal across a room. In 1883-1884, Thomas Edison discovered the principle of the vacuum tube but did not know any application for it at that time.

Nicolas Tesla is the inventor of the wireless radio. However, Guglielmo Marconi did design a practical application for this invention. In 1901, he sent the first wireless message across the Atlantic Ocean. It was the Morse Code letter, S. This invention would soon **compete** with the undersea telegraph cables.

In 1900, Reginald Fessenden developed an electrolytic detector which could be used for the transmission of voices. He thought Marconi's vision for wireless communication was too limited. Along with Lee de Forest, he formed other wireless companies. They looked for new ideas to compete with Marconi's wireless transmission of code only. Marconi used the 'spark' technology.

Fessenden thought that wave technology could be used to transmit voice and music. He wanted to develop wireless telephony. By 1900, he developed a rotary spark transmitter. It could carry a voice for one mile. When sending a voice signal, the audio signal is first placed onto the radio frequency wave and then removed at the other end. Originally, the sound was not very clear. He thought a cleaner radio wave would make the voice clearer. He then developed a high-speed alternator instead of the rotary spark technology.

Fessenden partnered with a scientist from General Electric Company to create such an alternator. In December 1906, he could send voice and music several miles. DeForest also made some **broadcasts** of music and voice in 1907. He then developed a three-element vacuum tube called an audition. A new era for radio began.

In 1909, because of wireless communication, 1500 passengers were saved from drowning when the *Republic* sank. Other ships in the area were notified and provided rescue help. However, when the *Titanic* struck an iceberg in 1912, the wireless system in use showed fatal flaws. Interruption occurred from other radios which blocked communication with ships which might have come to the rescue of the Titanic. The Wireless Act of 1912 set standards for radio operations. During World War I, all non-governmental radio stations were shut down. The U.S. Navy took over radio.

The Radio Corporation of America was founded after the war by General Electric Company. It took over the Marconi Wireless Telegraph Company. In 1920, Westinghouse Corporation of Pittsburgh started a radio station just for entertainment. The first station was KDKA. Hundreds of new stations followed, as well as government regulation and licensing. Since AM radio experienced a lot of atmospheric noise, FM (frequency modulation) radio began. Transistor radios exploded in the 1950's. They became the mobile device for everyone. By 1979, most radio listening was to FM.

Satellite-digital radio came along in 2000-2001. Most radio stations today 'stream' their programming on the internet. MP3 **portable** digital devices which store music now are competing with radio music.

TASK 1 Read the passage and answer the questions given below

1) Which of the following was the first radio station in the United States?
A: KDKA   B: KOBG   C: KPAD   D: KPVC

2) Who is considered to be the inventor of wireless radio?
A: Thomas Edison B: Guglielmo Marconi C: Nicolas Tesla D: Reginald Fessenden

3) Who discovered the principle of the vacuum tube?
A: Guglielmo Marconi B: Thomas Edison C: Nicolas Tesla D: Reginald Fessenden

4) Which of the following radio companies was founded after WWI?
A: American Radio Company   B: Radio Company of America
C: United States Radio Company   D: Radio Corporation of America

5) In which of the following cities did the first radio station begin?
 A: Boston   B: New York   C: Pittsburgh   D: Cleveland

6) When is the World Radio Day celebrated?
 A: 14th March   B: 13th February   C: 20th March   D: 13th March

TASK 2 Speaking Activity:
  Students will select a topic that is of relevance to their subject and speak for 2 minutes before the class

TASK 3 Listening:
   Listen to a Radio interview that will be played to you by the teacher and answer the questions relating to the interview

UNIT V

Pythagorean Theorem and its application in GPS, Construction and Video game

Learn the new words and their meanings

Triangle	a plane figure with three straight sides and three angles

Hypotenuse	the longest side of a right-angled triangle, opposite the right angle.
Geometry	the branch of mathematics concerned with the properties and relations of points, lines, surfaces, solids, and higher dimensional analogues.
Navigation	The process or activity of accurately ascertaining one's position and planning and following a route
GPS	Global Positioning System, an accurate worldwide navigational and surveying facility based on the reception of signals from an array of orbiting satellites.
Semi Circle	a half of a circle or its circumference.
Data	information processed or stored by a computer. This information may be in the form of text documents, images, audio clips, software program
Solar Physicist	Specializing in the study of the Sun.
Video games	an electronic game that involves interaction with a user interface to generate visual feedback on a two- or three-dimensional video display

Pre Reading activity

1. What is the Pythagorean theorem?

2. Can you give a brief history of the formulation of the Pythagoras Theorem?

3. Do you know where the principles of the Pythagorean theorem are used?

4. What is the name of the navigation system developed by India?

5. How many of you use Google maps?

We study science for understanding the practical applications of it. Ancient Greek philosopher and mathematician Pythagoras identified that the square on the hypotenuse of a right-angled triangle is equal in area to the sum of the squares on the other two sides. The Pythagorean Theorem introduces the relationship between the two sides of a triangle that make the right angle and the long side or hypotenuse that connects them. The square of each of the legs added together will equal the square of the hypotenuse. The Pythagorean Theorem states that for any right triangle, the sum of the squares of the two legs is equal to the square of the hypotenuse.

Pythagoras's theorem has many practical applications directly associated with our everyday life like construction, Global Positioning System (GPS), data transfer, and Video games. In construction, it is useful in laying foundations for buildings by measuring the

right length and width. If the string lengths were measured correctly, the corner opposite the triangle's hypotenuse will be a right angle, so the builders will know that they are constructing their walls on the right lines. This theorem is useful in erecting proper beams to support the roof and to calculate the area of the roof. Architects and engineers extensively use the principles of this theorem for laying the foundation, constructing staircases and roofs.

It will be surprising to know that this theorem functions as the basic principle of one of the most advanced inventions in human history, the navigation system. Now many countries have their navigation systems. The GPS of the United States America, GLONASS of Russia, Galileo of the European Union, BeiDou of China, QZSS of Japan, and NavIC of India are the operational navigation systems in the world today. These navigation systems guide aircraft, ships, and other vehicles accurately to reach their destination. In navigation, the Pythagorean theorem helps to calculate the distance between two points. The satellites orbiting the entire globe transmitting positioning and timing data all through the day. Navigation in three dimensions is the basic function of navigations systems used around the world. Navigation receivers in the aircraft, ships, and ground vehicles supply data to control systems over radio signals. The GPS of the USA is the most famous navigation system used almost all over the world. It uses a constellation of earth-orbiting satellites to send and receive data. Any navigation system uses signals from three different satellites to calculate the distance by performing triangulation activity. Navigation systems help in precise positioning and movement of objects. An Aircraft will use its altitude and its distance from destination to identify the right place to begin a descent to the airport. Navigation systems are used for military purposes in the past but now they are provided to all, hence we can use our smartphone to find out a destination or calculate distance.
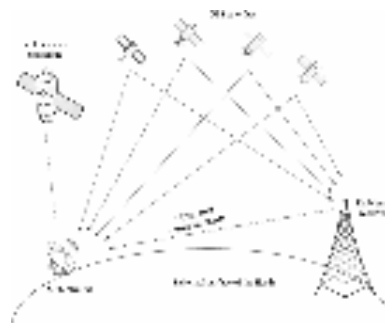
Navigation and positioning systems are also useful for cartographers and makes their work in calculating distances between various places or calculating the steepness of mountains an accurate one. Cartographers calculate the numerical distances by the process of surveying before creating a map. To survey the uneven terrain is, surveyors use ways to take measurements of distance and height systematically. The principles of the Pythagorean theorem contribute to creating maps with accurate details of the terrain and distance between places.

Video games are quite popular nowadays, it will be surprising to many to know that even game developers use the principles of the Pythagorean theorem in creating the games. The movement of the objects in a game and boundaries for the movement of objects are determined by the principles of this theorem. The distance between two moving objects, the player and the enemy, and their speed are calculated employing the principles of the theorem.

When it comes to the transfer of data through the internet , the data is imagined to be pointed in space by the Computer programmers and Pythagoras's theorem is a way of calculating the right location of these points. It is also helpful in verifying that there is no corruption in the transmission of data which makes error-free downloading of information possible. This principle helps to create technology by which people listen to online music and watch videos. Pythagoras theorem, a statement in geometry, invented thousands of years ago remains to be the basis of technology used by engineers, architects, cartographers, aviators, sailors, computer programmers, and solar physicists. In the present day, TV sizes are measured on the diagonal, one can identify which size of the TV is suitable for a room using the principles of the theorem.

Choose the correct definition of these words and expressions in italics in the context they are used in the text

1. useful in *erecting* proper beams to support…
   (i) put together and set upright
   (ii) stand straight
   (iii) create

2. this theorem *functions* as the basic principle…
   (i) celebrations
   (ii) acts or works
   (iii) a mathematical terminology

3. use its *altitude* and its distance…
   (i) a settled way of thinking or feeling about something
   (ii) height from the sea level
   (iii) time traveled

Read the text and fill in the gaps with the following words

Telescope	Steepness	Squares	length of the slope
Pythagorean theorem	Height	Hypotenuse	right angles

The Pythagorean theorem states that with a right-angled triangle, the sum of the

_____ of the two sides that form the right angle is equal to the square of the third, long

side, which is called the_____.

One of the classic uses of the Pythagorean theorem is in laying the foundations of buildings. To make a rectangular foundation, you need to make_____. But how can you do that? When you have the length and width, you can use_____it to make a precise right angle. A theorem is a great tool for solving distance between two points and creating symmetrical designs in games like Minecraft.

It's also useful to cartographers, who use it to calculate the_____of hills and mountains. A surveyor looks through a_____toward a measuring stick a fixed distance away, so that the telescope's line of sight and the measuring stick form a right angle. Since the surveyor knows both the height of the measuring stick and the horizontal distance of the stick from the telescope, he can then use the theorem to find the_____that covers that distance, and from that length, determine how steep it is.

The same principles can be used for navigation. For instance, a plane can use its

_____ above the ground and its distance from the destination airport to find the correct

place to begin a descent to that airport.

Activity III. Reading Comprehension

Read the third paragraph of the text and answer the questions given below

1. What is a navigation system?

…………………………………………………………………………………

2. What is the name of the navigation system developed by India?

…………………………………………………………………………………..

3. How is the navigation system useful for an aircraft?

………………………………………………………………………………….

4. How does the Pythagorean theorem help in navigation?

…………………………………………………………………………………..

5. How does a navigation system work?

…………………………………………………………………………………..

Activity IV: Speaking

The navigation system is one of the most advanced inventions in Human history. Think about this sentence and share your views with him/her. Talk to your friends about the validity of the statement.Note down points. Report your views to the class when your teacher asks you.

………………………………………………………………………………………………

………………………………………………………………………………………………

………………………………………………………………………………………………

…………………………………………………………………………………………….

Activity VI. Think and Write

Have you ever used maps to locate a place? Write your experiences

………………………………………………………………………………………………

………………………………………………………………………………………………

………………………………………………………………………………………………

………………………………………………………………………………………………

Space Exploration

New words and concepts

Transmission-	the act of transferring something from one place to another.
Deep space	starts from a distance of 2 million kilometers from the Earth's surface.
Orbiters	A robotic instrument used to orbit a planet and take pictures
Rovers -	a robotic device used to move in a planet
Landers	a robotic device that is used to land on a planet

What do you know about satellites?

How is space technology useful to us?

How do we get signals for our Dish Antennas?
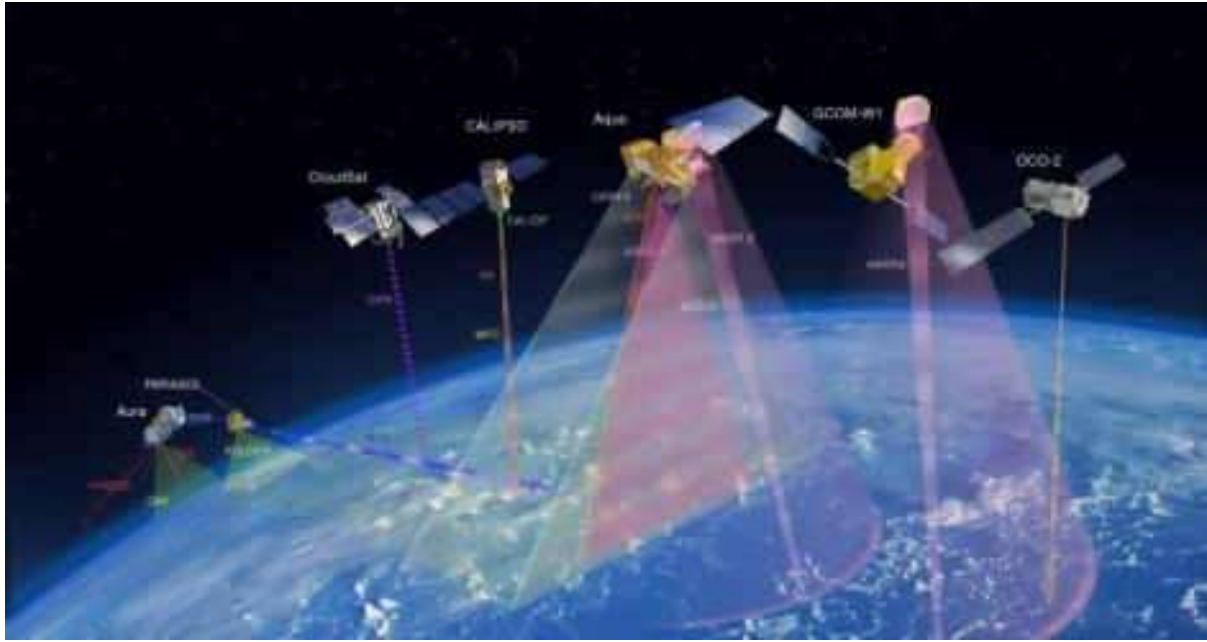
Humans have a great fascination for space and attempted to explore it for a long period of time. During the later part of the 20th century, the man was able to overcome the force of gravity and developed rockets that can reach orbital velocity. This invention of space vehicles that can attain escape velocity paved the way for space exploration. During world war II the Germans developed missiles with a range of 200 miles. Immediately after the world war both the then Soviet Union and the USA began their missile and space programmes and competed for superiority in the space. The Soviet Union tasted success initially as it achieved both the milestones of launching the first satellite in 1957 and sending a human being to orbit earth in 1961. The USA stunned the world by its moon landing missions when astronaut Neil Armstrong in 1969 became the first human being to land in the moon. During the beginning of the 1970s satellites were used primarily for military purposes. Deep space exploration became the focus of the space powers as many satellites and robotic spacecraft were sent to explore the planets like Mars, Venus, Jupiter, and Saturn. Americans launched and deployed 'Sky Lab' the first space station which has altered the modes of deep space exploration. The 1980s marked the emergence of a new era in space technology when satellites were used to transmit television programmes and telecommunication signals. Satellites begin to influence human life in unprecedented ways as they played a pivotal role

in communication, remote sensing, and earth observation. In a way, satellites contributed immensely to the communication revolution and it continues to contribute to the evolution of communication systems.

The reusable space shuttles enhanced the possibilities of interplanetary missions and sending orbiters, landers, and rovers to various planets. Some rovers landed in asteroids and brought back material to earth. The world has witnessed *the significance* of satellites and space technology during the Gulf war, where the allied forces enjoyed the advantage of space science in gathering information about troop movements, possible missile attacks, and precise navigation. The progress of the war clearly indicated the dominance of the allied forces and the huge difference found was the advanced space technology.

The end of the cold war marked the end of competition between the USA and the USSR in space. America and Russia along with other countries established an international space station, a research laboratory in space that collects data that contributes immensely to our understanding of the origin and evolution of galaxies, planets, and other cosmological elements. Earth-orbiting satellites provide important services like weather forecasting, resource management, and telecommunication. They also offer indispensable help in positioning and navigation.

Activity I: Write about some of the great achievements of the Indian Space Research Organisation?

…..…………………………………………………………………………………………………

……………………………………………………………………………………………………

………………………………………………………………………………………………..

Activity II: Listen to the following paragraph as it is read aloud and answer the questions given below:

In many places on our planet, we experience severe disasters like earthquakes, tsunamis, and cyclones resulting in loss of life, loss of wealth, and, in some cases, the destruction of decades of progress made by countries and their valuable cultural heritage. India has earthquake problems periodically in certain regions. The U.S. Japan, Turkey, Iran, and many other countries also suffer due to earthquakes. Earthquakes and tsunamis are sub-terrain

phenomena and predicting this from space observations would be a great challenge. Space scientists of multiple nations should work together to use satellite deep penetration images to predict the earthquake or shock wave propagation. Other possibilities are a precise geodynamic measurement of strain accumulation by satellite to detect pre-slip, and electromagnetic phenomena prior to final rupture. The focus must be on earthquake forecasting with an adequate warning so that people can move to safer areas. Space technology can also be used for forecasting and modeling of volcanic eruptions, landslides, avalanches, flash floods, storm surges, hurricanes, and tornadoes.

(Reference:

https://www.bu.edu/csp/Conferences/Space_Exploration/Day1/Presentations/Kalam_Space%20Exploration%20and%20Human%20Life.pdf)

Fill in the blanks.
1. Earthquakes and tsunamis are_____phenomena.
2. Space scientists should work_____.
3. The focus must be on earthquakes_____.

Give the synonym from the passage for the following words.

1. picture. ————
2. predict ——————
3. sufficient —————

Give the antonym from the passage for the following words

1. Single. —————-
2. Experience —————.
3. Invaluable —————.

Fill in the blanks with the missing letter.

1. I__C EA E
2. V_ C____M
3. M_ T____N

Activity III. Listen to the passage and write on the uses of Space technology.

_____

_____

_____

_____

_____

Activity IV:

Keywords: Identify the keywords and write down them as the passage is being read.

1.—————-

2.—————-

3.—————-

4.—————-

5.—————

ACTIVITY V: Speaking Activity

Speak on the following topics

1. Describe any physical object that is related to your subject.

2. What are the benefits of space technology to the layman?

3.Discuss in a group the uses and abuses of GPS.

Activity VI: Relate to the following pictures and Speak for Two minutes.

: Watch this Video, 'India's Space Odyssey' in YouTube

https://www.youtube.com/watch?v=WEKzNH09Vqs

What are the major successes of the Indian
Space programme?

1...

2...

3...

Big Bang Theory

New words or Concepts Introduced

Big Bang theory	explanation about how the universe began.
Multiverse	hypothetical group of multiple universes
Large-scale structure	patterns of galaxies and matter on scales much larger than individual galaxies or groupings of galaxies.
Steady-state	an unvarying condition in a physical process, a theory that the universe is eternal and maintained by the constant creation of matter.
Dark energy	a new kind of dynamical energy fluid or field, something that fills all of space
Singularity	a location in spacetime where the gravitational field of a celestial body is predicted to become infinite
Reionization	the process that caused the matter in the universe to reionize after the lapse of the "dark ages"
Helium	colourless, odourless, tasteless, non-toxic, inert, monatomic gas
Atom's nuclei	Extremely small elements Containing more than 99.9% of the mass of an atom and are ten thousand times smaller than an atom!
Cosmos	Universe

Pre Reading Activity

- Who invented the big bang theory?
- What is the big bang theory?
- How did the Big Bang start?
- How fast is the universe expanding?

The Big Bang Theory is a comprehensive account of the expansion of the universe or an

explanation as to how the universe began. The Belgian priest and professor of Physics, Georges Lemaître was the first to suggest the big bang theory as a cosmological model for the universe in the 1920s. Many scientists have offered theories in which a single point of infinite density and

finite time is accounted for the origin of the universe and its expansion. The Big Bang Theory suggests that the expansion started before 14 billion years from a state where the universe was compressed into a single point. This expansion of the matter and energy in the universe is called the big bang. However, the process of expansion still continues. Studies reveal that the universe was an extremely hot, small, and dense super force. It had no stars, atoms, form, or structure and was called a "singularity." According to the reports of NASA, the surrounding temperature in the first second of expansion was about 10 billion degrees Fahrenheit (5.5 billion Celsius) and the density of energy was extreme for the first 10 to 43

seconds. Theoretical physics is still unable to provide a clear explanation of what was happening. The cosmos did contain fundamental particles such as neutrons, electrons, and protons, and these particles were pooled or decayed as the universe got cooler. Theories on the existence of "multiverse" are also prominent where some scientists suggest that our observable universe is just one among many. Like bubbles lying side by side, different universes would coexist in the "multiverse" model.

The Big Bang Theory is supported by strong empirical evidence that makes it universally accepted. However, the scientific community was divided between the Big Bang and its rival, a steady-state model for much of the 20th century. The characteristics of the initial state of the universe in extreme density and temperature can be calculated using the laws of physics. Big bang theory offers an explanation for the initial expansion of the universe and observes phenomena such as the abundance of light elements, the CMB, large-scale structure, and Hubble's law. Hubble's law in physical cosmology detects that galaxies move away from Earth at velocities proportional to their distance or in other words, the further they are the faster they move away from Earth. It is confirmed by scientists that the abundance of helium is a key prediction of the big bang. It was cool enough during the first second of expansion for the remaining matter to merge into protons and neutrons, the particles of atom's nuclei. In the first three minutes, protons and neutrons amassed into hydrogen and helium nuclei. Hydrogen was 75 percent of the matter of early universe and helium was 25 percent, a key factor leading to the big bang.

Scientists believe that the expansion began with every fragment of energy jammed into an extremely tiny point. The universe is still expanding at an accelerating pace. The source of acceleration is thought to be propelled by a force called dark energy that repels gravity. It covers 68 percent of the universe's total matter and energy. But dark energy is still ambiguous to explain. The first star of the universe unleashed light capable enough to once again strip electrons from neutral atoms, a key chapter of the universe called reionization.

Activity I: What do you understand about the origin of the universe from the above text? Write in your own words.(100-200)

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Match these terms with the concepts

S.No	Terms	Concepts	Answer
1	Galaxy	the small, dense region consisting of protons and neutrons at the center of an atom	
2	Cosmology	the observation that galaxies are moving away from the Earth at velocities proportional to their distance	
3	Big bang theory	the scientific study of the large scale properties of the universe as a whole	
4	Density	A single point of very high temperature and infinite density	
5	Singularity	A measure of mass per volume	
6	Hubble's law	the universe began as just a single point, then expanded to grow as large as it is right now	
7	Proton	A subatomic particle with a negative electric charge	
8	Electron	A subatomic particle with no electric charge	
9	Neutron	A subatomic particle with a positive electric charge	
10	Atomic nuclei	a huge collection of gas, dust, and billions of stars and their solar systems, all held together by gravity	

Read the text and fill in the gaps with the following words

Finite	Brane	proton	fusing
galaxie	large-	light	reionizatio

The beginning of our universe would have been nice and _____. The cyclic model posits that our universe consists of 11 dimensions, only four of which we can observe (three of space and one of time). Our four-dimensional part of the universe is called a _____(short for membrane). Just after inflation, the universe was likely filled with hot, dense plasma. But by around 1 microsecond (10 to the minus 6 seconds) or so, it had cooled enough to allow the first_____and neutrons to form, researchers, think. In the first three minutes after the Big Bang, these protons and neutrons began together, forming deuterium   (also known as heavy hydrogen). Deuterium atoms then joined up with each other, forming helium 4. Over time, stars gravitated together to form_____, leading to more and more _____ structure in the universe. Planets coalesced around some newly forming stars, including our own sun. And 3.8 billion years ago, life took root on Earth. Once the universe's first stars ignited, the _____they unleashed packed enough punch to once again strip electrons from neutral atoms, a key chapter of the universe called _____.

Find a word in the following paragraph of the text that means the same as the words and phrases are given below

The Big Bang Theory is supported by strong empirical evidence that makes it universally accepted. However, the scientific community was divided between the Big Bang and its rival, a steady-state model for much of the 20th century. The characteristics of the initial state of the universe

in extreme density and temperature can be calculated using the laws of physics. Big bang theory offers an explanation for the initial expansion of the universe and observes phenomena such as the abundance of light elements, the CMB, large-scale structure, and Hubble's law. Hubble's law in physical cosmology detects that galaxies move away from Earth at velocities proportional to their distance or in other words, the further they are the faster they move away from Earth.

1. Verifiable by observation - ————————————————

2. Observable fact or event - ———————————————---

3. Plenty.   - ———————————————————————

4. Corresponding - ———————————————————————

5. Features   - ———————————————————————

Activity V.

Read the above paragraph and find five words

1.———————

2.———————

3.———————

4.———————

5.———————

Activity VI: Write a summary of the paragraph given above.

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Does 5G pose health risks?

Read the following News article:

By Reality Check team
BBC News

The 5G mobile network has been switched on in some UK cities and has led to questions about whether the new technology poses health risks. So what are the concerns, and is there any evidence to back them up?

What's different about 5G?

As with previous cellular technologies, 5G networks rely on signals carried by radio waves - part of the electromagnetic spectrum - transmitted between an antenna or mast and your phone. We're surrounded by electromagnetic radiation all the time - from television and radio signals, as well as from a whole range of technologies, including mobile phones, and natural sources such as sunlight. 5G uses higher frequency waves than earlier mobile networks, allowing more devices to have access to the internet at the same time and faster speeds. These waves travel shorter distances through urban spaces, so 5G networks require more transmitter masts than previous technologies, positioned closer to ground level.

What are the concerns?

The electromagnetic radiation used by all mobile phone technologies has led some people to worry about increased health risks, including developing certain types of cancer. In 2014 the World Health Organization (WHO) said that "no adverse health effects have been established as being caused by mobile phone use".

However, the WHO together with the International Agency for Research on Cancer (IARC) has classified all radiofrequency radiation (of which mobile signals are a part) as "possibly carcinogenic". It has been put in this category because "there is evidence that falls short of being conclusive that exposure may cause cancer in humans". Eating pickled vegetables and using talcum powder are classed in the same category. Alcoholic drinks and processed meat are in a higher category because the evidence is stronger.
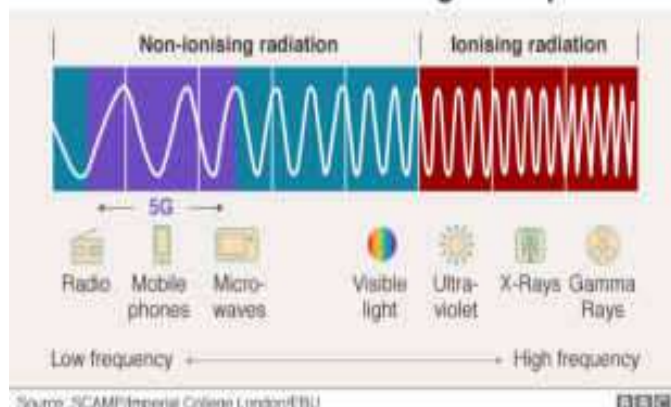
A toxicology report released in 2018 by the US Department of Health, and pointed to by those expressing safety concerns, found that male rats exposed to high doses of radiofrequency radiation developed a type of cancerous tumour in the heart. For this study, rats' whole bodies were exposed to radiation from mobile phones for nine hours a day every day for two years, starting before they were born. No cancer link was found for the female rats or the mice studied. It was also found that rats exposed to the radiation lived longer than those in the control group.

A senior scientist on the study said "exposures used in the studies cannot be compared directly to the exposure that humans experience when using a cell phone", even for heavy users. Dr. Frank De Vocht, who helps advise the government on mobile phone safety says "although some of the research suggests a statistical possibility of increased cancer risks for heavy users, the evidence to date for a causal relation is not sufficiently convincing to suggest the need for

precautionary action". However, there is a group of scientists and doctors who have written to the EU calling for the rollout of 5G to be halted.

Where 5G fits in the electromagnetic spectrum

Non-ionising radiation | Ionising radiation

5G

Radio | Mobile phones | Micro-waves | Visible light | Ultra-violet | X-Rays | Gamma Rays

Low frequency ← → High frequency

Source: SCAMP/Imperial College London/EBU — BBC

Radio waves are non-ionising

The radio waveband - used for mobile phone networks - is non-ionising, "which means it lacks sufficient energy to break apart DNA and cause cellular damage," says David Robert Grimes, physicist and cancer researcher.

Higher up the electromagnetic spectrum, well beyond those frequencies used by mobile phones, there are clear health risks from extended exposure. The sun's ultra-violet rays fall within this harmful category and can lead to skin cancers.

There are strict advisory limits for exposure to even higher energy radiation levels such as medical x-rays and gamma rays, which can both lead to damaging effects within the human body. "People are understandably concerned over whether they might elevate their risk of cancer, but it's crucial to note that radio waves are far less energetic than even the visible light we experience every day," says Dr. Grimes. "There is no reputable evidence," he says "that mobile phones or wireless networks have caused us health problems."

Should we be worried about 5G transmitter masts?

5G technology requires a lot of new base stations - these are the masts that transmit and receive mobile phone signals. But crucially, because there are more transmitters, each one can run at lower power levels than previous 4G technology, which means that the level of radiation exposure from 5G antennas will be lower. The UK government guidelines on mobile phone base stations say <u>radiofrequency fields at places normally accessible to the public are many times below guideline levels</u>.

What about heating dangers?

Part of the 5G spectrum permitted under international guidelines falls within the microwave band. Microwaves generate heat in objects through which they pass.
However, at the levels used for 5G (and earlier mobile technologies) the heating effects are not harmful, says Prof Rodney Croft, an adviser to the International Commission on Non-Ionizing Radiation Protection (ICNIRP). "The maximum radio frequency level that someone in the community could be exposed to from 5G (or any other signals in general community areas) is so small that no temperature rise has been observed to date."

Limits to exposure

The UK government says "while a small increase in overall exposure to radio waves is possible when 5G is added to the existing network, the overall exposure is expected to remain low". The frequency range of the 5G signals being introduced is within the non-ionising band of the electromagnetic spectrum and well below those considered harmful by the ICNIRP. "The exposure that 5G will produce has been considered in great depth by ICNIRP, with the restrictions set well below the lowest level of 5G-related radio frequency that has been shown to cause harm," says Prof Croft.

The WHO says electromagnetic frequency exposures below the limits recommended in the ICNIRP guidelines do not appear to have any known consequence on health. (https://www.bbc.com/news/world-europe-48616174)

b. Refer to the following news articles in connection with the previous article.

1. How 5G differs from previous network technologies:
   https://semiengineering.com/how-5g-differs-from-previous-network-technologies/

2. Prominent scientists warn that 5G could pose health hazards: https://www.thehindubusinessline.com/info-tech/scientists-caution-government-to-go-slow-on-5g-roll-out/article28737197.ece

3. '5G is unlikely to cause health concerns': https://www.downtoearth.org.in/interviews/science-and-technology/-5g-is-unlikely-to-cause-health-concerns--63698

4. 5G Features and Benefits- Intel: https://www.intel.com/content/www/us/en/wireless-network/5g-benefits-features.html

Activity 1 **Critically reflect your ideas on the following topic in the form of an essay based on your previous readings.**

1. The Advantages and the Dis-advantages of 5G Network Technology.

Activity 2 Reading:

Words given in the table are related to various fields. Identify the discipline to which they belong to and circle them in different colours.

Hyperlink	Air	Hack	Alchemy
Aerosol	Binary	Curve	Counting
Cylinder	Firewall	Atomic weight	Byte
Broadband	Difference	Atom	Base
Compress	Plane	ellipse	Equilateral
Barometer	Cloud computing	Calorie	Bus
Cache	Deflagration	Linear	Debug
Boiling point	Firmware	Dynamic	Bronze
Imaginary	Encryption	Buffer	Flash drive
Calorimeter	Polygon	Nano	Integer
Abrasive	Billion	Negative	Obtuse
chalcogen	Charge	Inverse	Atomic radius