

Technical English

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An Up-Thrust for Knowledge

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TECHNICAL ENGLISH

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TECHNICAL ENGLISH

Semester - II (Common to All Branches)

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PREFACE

The importance of **Technical English** is well known in various engineering fields. Overwhelming response to my books on various subjects inspired me to write this book. The book is structured to cover the key aspects of the subject **Technical English**.

The book uses plain, lucid language to explain fundamentals of this subject. The book provides logical method of explaining various complicated concepts and stepwise methods to explain the important topics. Each chapter is well supported with necessary illustrations, practical examples and solved problems. All the chapters in the book are arranged in a proper sequence that permits each topic to build upon earlier studies. All care has been taken to make students comfortable in understanding the basic concepts of the subject.

The book not only covers the entire scope of the subject but explains the philosophy of the subject. This makes the understanding of this subject more clear and makes it more interesting. The book will be very useful not only to the students but also to the subject teachers. The students have to omit nothing and possibly have to cover nothing more.

I wish to express my profound thanks to all those who helped in making this book a reality. Much needed moral support and encouragement is provided on numerous occasions by my whole family. I wish to thank the **Publisher** and the entire team of **Technical Publications** who have taken immense pain to get this book in time with quality printing.

Any suggestion for the improvement of the book will be acknowledged and well appreciated.

Author
R. Edin Brow

Dedicated to My Heavenly Father, Wife, Relatives and Friends...

SYLLABUS

Technical English [HS8251]

Unit I : Introduction Technical English

Listening - Listening to talks mostly of a scientific/technical nature and completing information-gap exercises- **Speaking** - Asking for and giving directions- **Reading** - reading short technical texts from journals- newspapers- **Writing** - purpose statements - extended definitions - issue- writing instructions - checklists - recommendations - **Vocabulary Development** - technical vocabulary **Language Development** - subject verb agreement - compound words. (Chapter - 1)

Unit II : Reading And Study Skills

Listening - Listening to longer technical talks and completing exercises based on them-**Speaking** - describing a process-**Reading** - reading longer technical texts- identifying the various transitions in a text - paragraphing- **Writing** - interpreting charts, graphs- **Vocabulary Development**-vocabulary used in formal letters/emails and reports **Language Development** - impersonal passive voice, numerical adjectives. (Chapter - 2)

Unit III : Technical Writing and Grammar

Listening— Listening to classroom lectures/ talks on engineering/technology –**Speaking** – introduction to technical presentations- **Reading** – longer texts both general and technical, practice in speed reading; **Writing**-Describing a process, use of sequence words- **Vocabulary Development**- sequence words- Misspelled words. **Language Development**- embedded sentences. (Chapter - 3)

Unit IV : Report Writing

Listening - Listening to documentaries and making notes. **Speaking** - mechanics of presentations- **Reading** - reading for detailed comprehension- **Writing** - email etiquette- job application - cover letter - Résumé preparation (via email and hard copy)- analytical essays and issue based essays - **Vocabulary Development** - finding suitable synonyms-paraphrasing- **Language Development**- clauses- if conditionals. (Chapter - 4)

Unit V : Group Discussion and Job Applications

Listening- TED/Ink talks; **Speaking** -participating in a group discussion -**Reading**- reading and understanding technical articles **Writing**- Writing reports- minutes of a meeting- accident and survey- **Vocabulary Development**- verbal analogies. **Language Development**- reported speech. (Chapter - 5)

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UNIT - I

1

Introduction to Technical English

Syllabus : **Listening** - Listening to talks mostly of a scientific/technical nature and completing information-gap exercises- **Speaking** - Asking for and giving directions- **Reading** - reading short technical texts from journals- newspapers- **Writing** - purpose statements - extended definitions - issue- writing instructions - checklists - recommendations - **Vocabulary Development** - technical vocabulary **Language Development** - subject verb agreement - compound words.

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Technical English promotes the basic skills and enhances the ability of young Engineers and Technocrats to read and comprehend engineering and technology texts. The main objective of the Technical English is to enable the learners use English for technical communication. The Engineers need a specific set of language skills for their success in education and career. It fosters their ability to write convincing job applications and effective reports, develop their speaking skills to make technical presentations, participate in group discussions, and also to strengthen their listening skill which will help them comprehend lectures and talks in their areas of specialization.

Technical English provides opportunities for students to improve their Listening, Speaking, Reading, and Writing (LSRW) skills in English. The success mantra of an engineer in the current era relies on profuse technical knowledge and proficient communication skills as well.

This Technical English book has been designed for Engineers and Technologists who aspire to improve their LSRW skills in English. The textbook provides opportunities for learners to expand their abilities in all their skills. Each chapter is clearly and concisely explained with practice exercises. Each topic contains brief introduction and practice exercise for the learners to know the basics and to work out the exercise individually or collectively. The language used in this book is contemporary and applicable to all types of readers in English. The main objective focused in this book is to help the students to understand Technical English and to use their skills for meaningful communication and interaction. At the end, the learners will be able to read technical texts and write technical texts with ease. They will also be able to listen and comprehend lectures and talks in their area of specialization, and speak appropriately and effectively in varied formal and informal contexts.

Reading

1.1 Read the Following Short Passage

Anesthetics are drugs causing unconsciousness or insensibility to pain. Their use in modern medicine permit painless surgery during the simplest operation of a few minutes duration, to the most delicate operation lasting many hours. Anesthetics are divided into two broad groups; General anesthetics and Local anesthetics. General anesthetics can cause total unconsciousness in the patient by temporarily altering the normal activities of the central nervous system. Local anesthetics temporarily deaden the sensation on a particular or local area of the body. General anesthetics are usually administered to the patient in one of the two ways inhalation or intravenous injections. In the inhalation method the patient breathes a gas or vapour into his lungs. In the intravenous injection, the drug is put directly into a vein. Two drugs often used as general anesthetics in operations of short duration is the liquid vinethene, which causes rapid anesthesia, and trilene, which produces a light, pain killing effect. Trilene is usually combined with nitrous oxide and oxygen. Not all surgery requires that the patient be unconscious For minor operations, only restricted or local area of the body need be made insensible to pain; thus a local anesthetic is administered. The local anesthetic prevents sensations of pain from traveling through the nerves in the drugged area. Local anesthesia can be produced through three sites of injection. Infiltration is the injection of the drug into the tissues. Block anesthesia is produced by the injection of the injection of the drug around the main nerves leading to the operating areas. These main nerves are blocked from transmitting sensory impulses. Spinal anesthesia results from the injection of the drug into the space surrounding the spinal cord.

a. Answer the following questions briefly

- i. What is the difference between 'general' and 'local' anesthesia?
- ii. How does the local anesthesia work in the body of the patient?
- iii. Explain the functioning of block anesthesia.
- iv. Explain how general anesthesia is administered to the patient?
- v. Does the patient need to be unconscious in all types of surgeries? Explain.

b. Say whether the following statements are 'true' or false'.

- i. Local anesthesia can cause total unconsciousness in a patient.
- ii. General anesthesia temporarily stops all the activities of the nervous system.
- iii. In block anesthesia, the main nerves in the operating area are blocked from transmitting pain.

- iv. Liquid vinethene is a drug used in local anesthesia.
- v. In local anesthesia, pain cannot travel through the drugged area.
- vi. Spinal anesthesia is a type of local anesthesia.

1.2 Listening Activity**Listening Exercise :**

You will now hear a lecture on literary moments in United States History.

- Have a quick look at the questions first to see what kind of information you need to fill in.
- When you hear the movement titles, listen carefully as you will hear your answers next.

Listen to the introduction lecture to a course on American Literature, and fill in the table below using one to three words for each gap.

Movement Title	Time Period	Origins	Core Beliefs and Important Figures
Transcendentalism	1830s - 1860s	New ____ (1) ____; the north eastern part of the US	People can achieve spirituality without ____ (2) ____. People are responsible for their own development. Ralph Waldo Emerson: published Nature in ____ (3) ____.
Romanticism	1830s - 1870s	Germany and ____ (4) ____	Focus on imagination and strong emotions. American works also typically include the supernatural and focus on human ____ (5) ____. Edgar Allen Poe: best known for tales of ____ (6) ____.
Realism	____ (7) ____s - 1920s	France	Focus on events that were ____ (8) ____ and typical rather than extraordinary. Many writers were also concerned with social change like ____ (9) ____. Mark Twain: Wrote about ordinary life in the ____ (10) ____ part of America.

Naturalism	1890s - 1920s	___(11)___	A person can not escape ___(12)___ . A person's behaviour is influenced by that person's ___(13)___ . Jack London: Humans behave like animals in extreme circumstances.
Modernism	1890s - 1940s	Europe	Focus on ___(14)___ . Finding out what doesn't work and replacing it. Ezra Pound: Completely changed ___(15)___ .

Note to teachers : (Refer : Lecture Guide Task 1 for the content of the passage)

Speaking

1.3 Asking and Giving Directions

When you are asking or giving directions, you need to use polite words and ensure you are always polite. Be clear and pronounce each and every word clearly, and mainly the key words or the landmarks. Use appropriate gestures and especially hand gestures to demonstrate what you are trying to say. Avoid giving or asking vague directions. Do not assume that the other person will know the landmarks which you mention. Here are some ways to ask and give directions :

The nice way to start the conversation is by saying excuse me or hello sir/madam.

Excuse me, can you tell me the way to bus stand?

Sir, Can you tell me the way to reach railway station?

Madam, Is there any ATM nearby?

Excuse me, which is the best way to get to airport?

Hello Sir, Do you know where the nearest supermarket is from here?

Hello Madam, Could you show me the way to medical store?

While giving directions use gestures to say left, right, straight ahead, opposite, across and so on.

Be polite and use 'Please and thank you' for positive response and hospitality.

Use keywords or landmarks while giving direction like name of the streets, road, shops, and so on.

Exercise for Practice :

Woman : _____ library?

Man : Yes _____

Woman : _____, I don't know the police station.

Man : Oh, OK. Listen, _____

Woman: I have to _____, OK.

Man : Yes, it's easy. _____ Street.

Then go _____ for about 200 metres. Then you get to the _____.

Woman : The post office.

Man : Yes, it's on the _____.

Woman : On the right, OK.

Man : _____ post office, _____ into Beach Road.

Woman : Beach Road, OK.

Man : _____ the road, then _____ at the _____.

Woman : Yes, OK.

Man : The _____ is in _____. It's at the _____ of the street, on the _____.

Woman : Thanks very much.

Pair Work

Instructions : Take turns asking for the location of bakery, railway station, post office, Gift shop, beauty parlour, and ATM services in your locality. Write the conversation below :

Student 1 : _____

Student 2 : _____

Student 1 : _____

Student 2 : _____

Student 1 : _____

Student 2 : _____

Student 1 : _____

Student 2 : _____

Student 1 : _____

Student 2 : _____

Student 1 : _____

Student 2 : _____

Student 1 : _____

Student 2 : _____

Student 1 : _____

Student 2 : _____

Student 1 : _____

Student 2 : _____

Student 1 : _____

Student 2 : _____

Student 1 : _____

Student 2 : _____

Student 1 : _____

Student 2 : _____

Student 1 : _____

Student 2 : _____

Student 1 : _____

Student 2 : _____

Student 1 : _____

Student 2 : _____

Writing

1.4 Purpose Statements

Phrases / structures indicating use and purpose

For example

- Safety valve : release excess pressure.

The purpose of safety valve **is to** release excess pressure.

The safety valve **is used for** releasing excess pressure.

The safety valve **is used to** release excess pressure.

The ten sentences below express the idea of purpose.

Use the hints to construct sentences combining the use and purpose :

- | | |
|------------------|--|
| 1. Aerial | : receives broad cast signal |
| 2. Barometer | : measure atmosphere pressure |
| 3. Robots | : perform heavy and dangerous job |
| 4. Catalyst | : speed up the chemical process |
| 5. Camera | : take photographs |
| 6. A Clamp | : holds two things firmly together |
| 7. An Experiment | : demonstrates a principle |
| 8. A flowchart | : represent a process as a series of steps |
| 9. Carbon paper | : make duplicate copies |
| 10. Lubricant | : reduce friction |

Write purpose statement for the following :

1. Refrigerator
2. Washing Machine
3. Constructing a by-pass road
4. A lever
5. A flashlight
6. Cell phone
7. Computer
8. I-pod

9. Printer

10. Thermometer

1.5 Extended Definition

In an extended definition, the term is defined with its general class. A formal definition of the term is given in the introduction. Then, the use, unique property and other general features are explained. In the next paragraph description is given and then the functions are mentioned.

Extended definition plays a vital role in the process of technical writing. It is a form of definition that explains about the term shortly or in a detailed form. Extended definition can be written in a paragraph or in a detailed way.

In an extended definition, a formal definition is given in the introduction. The term is been defined to a general class and then its unique property is mentioned. It can be further explained by describing about its appearance or observance of the term. Later, the process or its function is being said with its salient features. The purpose and function along with its uses can also be mentioned. Lastly, it should be concluded with a good ending for the explanation given before.

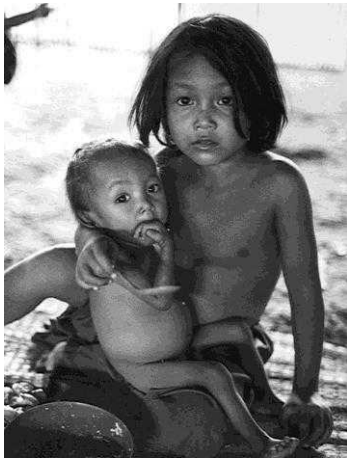
Exercise for Guidance :

Sample 1 : Below is an extract from the World Bank's definition of corruption. This is an example of an extended definition. As you read it, look for the techniques used to write an extended definition.



The term corruption covers a broad range of human actions. To understand its effect on an economy or a political system, it helps to unbundled the term by identifying specific types of activities or transactions that might fall within it. In considering its strategy the Bank sought a usable definition of corruption and then developed taxonomy of the different forms corruption could take consistent with that definition. We settled on a straightforward definition—the abuse of public office for private gain. Public office is abused for private gain when an official accepts, solicits, or extorts a bribe. It is also abused when private agents actively offer bribes to circumvent public policies and processes for competitive advantage and profit. Public office can also be abused for personal benefit even if no bribery occurs, through patronage and nepotism, the theft of state assets, or the diversion of state revenues. This definition is both simple and sufficiently broad to cover most of the corruption that the Bank encounters, and it is widely used in the literature. Bribery occurs in the private sector, but bribery in the public sector, offered or extracted, should be the Bank's main concern, since the Bank lends primarily to governments and supports government policies, programs, and projects.

Sample 2 : Refugee children



Refugee children are among the most vulnerable children in the world. Not only have they suffered from

war or other forms of persecution in their countries of origin which forced them to flee their homes, but many refugee children continue to suffer human rights abuses in countries of asylum. More than half of the world's refugee population is children, yet their rights and special protection needs as children are frequently neglected. Article 22 of the Convention on the Rights of the Child grants special protection to refugee children. Refugee children who are not being cared for by their parents are entitled to further protections. Refugee children fleeing war are also entitled to special protection under article 38 of the convention, as children affected by armed conflict. Like all children, they are also entitled to all other rights granted under the convention including the rights to life, physical integrity, adequate food and medical care, education, and to be free from discrimination, exploitation, and abuse.

Exercise for Practice :

1. Laser Technology
2. High Technology
3. Computer
4. A printer
5. Lathe
6. Solar cooker
7. Library
8. Laboratory
9. Robot
10. Washing machine
11. Bluetooth technology
12. Internet
13. Wireless Communication
14. Pollution
15. Bribery

1.6 Instructions

Instructions are usual in the world of work. Examples are fire drills, grievance procedures, and instructions for using equipment. You need to write the instructions with a verb that tells the reader to do something. It can be written with notes and warnings at the start of the instructions. Write the instruction for the audience and use a level of detail that is suitable to their skill level.

Here are some guidelines to help you to write clear instructions :

- Instruction must be in imperative form.
- Start the statement with a verb.
- Avoid ambiguity and maintain logical order.
- Language should be precise and clear.
- Do not repeat the same ideas and expressions.
- Each sentence should focus on a single task.
- Try to present different ideas covering all aspects related to the topic.
- Precautions are also a part of instructions. Precautions can be expressed by using 'avoid', 'caution', 'take care', 'don't', 'do not', and so on.
- Lastly, check your statements for grammatical and technical accuracy.

Exercise for Guidance :

Write a set of eight instructions to maintain a computer in good working conditions.



- Clean the computer regularly with dry cloth.
- Protect the computer from viruses.
- Scan the computer fully instead of fast scan.
- Allow the computer to check and scan the hard disk.
- Use a UPS to avoid current fluctuation problems.
- Don't misplace the hardware components at any moment.
- Shut down the computer properly.
- Check whether the power is off after shutting down.

Exercise for Practice :

1. Write a set of eight instructions to maintain discipline in college day function.



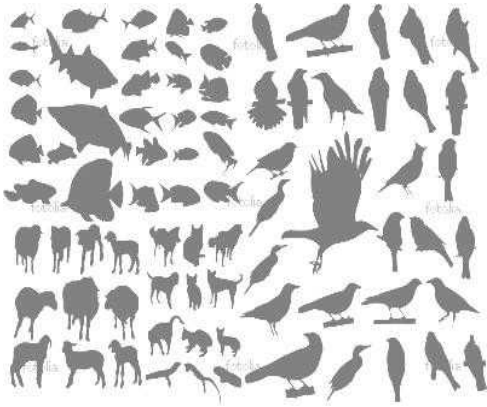
2. Write a set of eight instructions that are to be followed by the students while writing an examination.



3. Write a set of eight instructions to guide the students who appear for campus interview.



4. Write a set of eight instructions that are to be followed to preserve the wildlife.



5. Write a set of eight instructions to maintain safety when students are working in a chemistry laboratory.



6. Write a set of eight instructions to control water pollution.



7. Write a set of eight instructions that are to be followed by the students in the college library.



1.7 Checklists

Checklists may convey the idea that you have carefully analyzed a situation, that a sequence should be followed, or that you are a well-organized person. Checklists are memory aids that can be used at various stages of a project life cycle: Sales, Project and Maintenance. It is also prepared for personal use to ensure that all the necessary things are properly done before carrying out any task. Checklists can be in the form of questions or statements. It helps to ensure consistency and completeness in carrying out a task. It is thus designed to be used to provide evidence of completion of the process.

Checklists can act as memory aids to make sure that all the relevant issues have been considered. Checklists need to be relevant to whatever you are checking, and detailed enough to enable you to do a thorough job. For Example: If you are buying a personal computer, you may have a specification checklist that tells you what speed computer you need, how much memory it needs to play your games, what size monitor you would like and so on. Here are some guidelines to help you to write clear instructions :

- Give a suitable title for the checklist.
- Interrogative form is widely used for writing the checklist.
- Start the statements or questions with an auxiliary verb followed by the subject.

- Auxiliary verbs such as 'Have', 'Has', 'Did', 'Do', 'Does', 'Is', and 'Are' can be used to begin the questions.
- After each question, 'Yes' or 'No' boxes should be given to check whether the work has been completed or not.
- Language should be simple and clear. Your checklist should be simple to understand.

Exercise for Guidance :

Imagine you have to go to Bangalore to attend an interview. Make an eight-item checklist with a proper title for your own reference. Write a checklist containing eight items which will help you prepare for the interview.

Checklist for Bangalore Interview

	Yes	No
1. Have I collected all the information about the place of interview ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Have I arranged for staying ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Do I have enough money for the expenditure ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Have I taken proper formal dress to wear ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Do I have any contact number for guidance ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. Have I taken all the certificates and call letter ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. Have I prepared well for the interview ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8. Have I arranged for packing the luggage ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Vocabulary

Technical Vocabulary

Technical vocabulary is generally used only by specialists in the field, who work within a particular

academic community. They are unique to a particular field in both form and meaning. Someone who knows these words is likely to have knowledge of that field well beyond knowing the words. Indeed, it is likely that these words can only be learned and really understood by studying the field. Technical words have more general meaning of the word and when used outside the field it does not provide ready access to its technical use.

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

A	B
Abundant	danger
Benign	make sure that something is followed
Enforce	plentiful
Hazard	favourable
Affluent	innumerable
Brittle	new
Innovative	abundantly rich
Myriad	easily broken
Chaos	hindrance
Dispel	confusion
Impediment	nourishment
Nutrition	scatter
Blame	arrival
Countless	multiply
Advent	numerous
Proliferate	rebuke

Aggravate rouse suddenly

Congestion making worse

Endeavour overcrowding

Stimulus attempt

Alleviate calm, peaceful

Hindrance collect and arrangement

Tranquil to make less intense

Compile obstacle

Contaminated deciding from symptoms

Amalgamation unclean

Conserve bringing together

Diagnostic preserve

Cramped command

Reminiscent danger

Jeopardy confined within narrow limits

Dominate recollect

Amphibian organism able to live both in land and water

Convoy property pledged by a borrower

Spell group

Collateral magic charm

Ferment necessary

Indispensable disobey

Violate making level

Synchronize acidify

Dwindle never ends or changes

Escalate reach its highest point

Perpetual rise

Culminate become less

Extraterrestrial firm belief

Conviction bring goods from foreign country

Attained not belonging to earth

Import achieve

Constraint complex

Intricate limitations or restriction

Repository comparison

Analogy storehouse

Holistic generate

Produce non observance

Core whole

Violation innermost part

Telnet set of instructions

Modem internet protocol

Zip electronic device

Algorithm compressed file format

Hacker Stir up

Agitate clever or expert programmer

Malware to analyze an object specifically

Parse malicious software

Diplomat	beautiful
Exquisite	any agent that cause fermentation
Ferment	concerned with complete system
Holistic	ambassador
Levitate	clever trick
Miniature	effect
Repercussion	increase
Stratagem	tiny part of something
Panorama	devoted or concerned with
Profuse	a continuous scene
Studios	calm
Tranquil	produced
Usurp	A slave or bondman
Vacuum	watchfulness
Vassal	emptiness
Vigilance	To take possession of by force
Taut	strongly emotional
Urban	Stretched tight
Vehement	To wither or dry up
Wizen	pertaining to a city or town

Language Development

Subject Verb Agreement/ Concord

English has no gender and no case in the noun, and no number in the adjective, so concord deals mainly with number agreement between subject and verb, and case agreement in pronouns. Agreement may be required in

tense, number, or case. Problems are more likely to occur in writing than in speech.

If the subject of a sentence is singular, then the verb form must be singular as well:

For example : The girl is singing. (Singular subject, singular verb)

The boys are playing. (Plural subject, plural verb)

Therefore, it is clear that in any type of sentence the Subject and verb must agree as to number. Verbs must agree as to tense and mood. And, nouns and pronouns must agree as to number and gender and case.

Rules about this Agreement are :

Agreement in person:

- When the words in the Subject are of different persons joined by 'and', the verb is always plural. For example: You and I are farmers. Ravi and Suresh are good friends.
- If the words in the Subject are of different persons joined by **or** or **nor**, the Verb agrees in person with the word nearest to it. For example: Either I or you are to blame. Either you or I am to blame.
- If two words in the subject are joined by 'as well as' the verb agrees in person with the first word. For example: Joseph as well as I is to blame. I as well as Joseph am to blame.
- If two nouns in the subject are joined by 'not only', 'but also', the verb agrees in person with the Second Noun. For example: Not only 'he' but his parents also are willing for this marriage.
- When the subject is a collective noun which represents a number of persons or things takes a singular verb. For example: Politics is the only field now opens for me. The college is working for the betterment of the students.

Agreement in Number

- When the Subject is in a Singular Number, the Verb also must be in Singular Number. For Example: He is

a student of medicine. We are school children. I am a violinist. You are a big miser.

- Two or more Nouns in the Subject joined by 'and' take a plural verb. For Example: Nathan and Arthi are classmates. I and she are bosom friends. Karna, Ganesh and Eddy are real brothers.
- Nouns joined by 'and' but referring to the same person takes a singular verb. For example: The poet and writer has died. My friend and sister-in-law is getting married.
- When two Nouns in the subject joined by 'and' refers to different persons, the Verb is Plural. For Example: The chairman and the writer have passed away. The manager and the owner are in the office.
- When two Nouns joined by 'and' refer to 'one Noun or Idea' the Verb is singular. For Example: Bread and butter is his favorite food. The poet and novelist has died.
- A subject preceded by 'every' or 'each' takes a singular verb. For Example: Every law and usage was a man's expedient. Each particular hue and tint stands by itself.
- The plural Nouns preceded by 'each of', 'one of', 'either of', 'neither of', takes a Singular verb. For example: Each of the boys is in his teens. One of them is lame of one leg. Either of these two roads leads to railway station. Neither of us is to blame.
- Singular Nouns joined by – or, nor, either, neither – takes Singular verb. For example: Neither he nor I am right. Either Mahesh or Naresh has done this work.
- A collective Noun can take either a 'singular' or 'plural' verb. For example: The police is after the robber. (one unit) The police are making an enquiry. (separate unit)
- Some Nouns look Plural in form but they take a singular verb. For example: This news is very

shocking. Physics is my favorite subject. Politics is being played well in that department.

- The Plural names of countries or states take singular verbs. For example: The United States of America is a very powerful country.
- Plural nouns making one quantity take singular verb. For example: Ten quintals is a heavy load. Hundred dollars is a reasonable pay.
- Some nouns singular in form take plural verb. For example : the cattle are grazing in the field. People were rushing out of the hall.

Exercise for Practice :

I. Fill in the blanks with correct verb form :

1. He _____ certainly a happy fellow at this time.
2. He sees that it I _____ better to live in peace.
3. The larger breed of camels _____capable of transporting a weight of a thousand pounds.
4. Between ourselves, three pounds five shillings and two pence _____no bad day's work.
5. Two thirds of this _____ mine by right.
6. Politics _____ the only field now opens for me.
7. "Sesame and Lilies" _____ Ruskin's creed for young girls.
8. Asia, as well as Europe, _____ dazzled.
9. The Epic, as well as the Drama, _____ divided into tragedy and Comedy.
10. These bits of wood _____ covered on every square.
11. The Arabian poets _____ the historians and moralists.
12. A great number of people _____ collected at a venue.
13. His clothes, shirt, and skin _____ all of the same color.
14. One or two persons in the crowd _____ insolent.

15. One or two of the ladies _____ going to leave.

II. Rewrite the sentences making the subjects agree with the verbs:

1. A series of lectures were delivered last month.
2. Fire and water does not agree.
3. The president, as well as the staff, were not able to attend.
4. The cost of computers are dropping day by day.
5. A number of jeweled paternosters were attached to her girdle.
6. Two thirds of this are mine by right.
7. Each particular hue and tint stand by itself.
8. A party of workmen was removing the horses.
9. Aristotle and Longinus is better understood by him.
10. Neither the red nor the white is strong and glaring

Fill in the blanks with appropriate form of the verb given in the bracket.

1. The computers in the college _____ broken. (has/have)
2. These apartment _____ built ten years ago. (is/are)
3. One of my best friends _____ working in US. (is/are)
4. This game _____ not require any special training or practice. (do/does)
5. Nobody _____ classes after 4:00 p.m. (take/takes)
6. Neither of the players _____ that he made an error. (admits/admit)
7. The student who sits next to the refreshments _____ solitaire. (play/plays)
8. Each of us _____ to give a report. (plan/plans)

9. The United Nations _____ its headquarters in New York. (has/have)

10. Everybody in the class _____ calculators. (has/have)

11. Each of them _____ a good seat. (has/have)

12. Ten million gallons of oil _____ spilled. (was/were)

13. A high tax, not to mention unemployment, _____ votes. (influence/influences)

14. John or Doris _____ to us regularly. (write/writes)

15. Your clothes _____ to be cleaned. (need/needs)

Exercise for Practice :

1. Write a checklist containing eight items to avoid fire accident in any factory.
2. Write a checklist containing eight items to conduct the Sports day function smoothly.
3. Prepare a checklist of eight important activities that you would like to do for the smooth conduct of symposium.
4. Write a checklist containing eight points to maintain discipline in college campus.
5. Write a checklist containing eight items to be observed by the students during study holidays.
6. Write a checklist containing eight points to be followed while presentation.
7. Write a checklist containing eight items to maintain two-wheeler in good condition.



UNIT - II

2

Reading and Studying Skills

Syllabus : **Listening** - Listening to longer technical talks and completing exercises based on them-**Speaking** - describing a process-**Reading** - reading longer technical texts- identifying the various transitions in a text - paragraphing- **Writing** - interpreting charts, graphs- **Vocabulary Development**-vocabulary used in formal letters/emails and reports **Language Development** - impersonal passive voice, numerical adjectives.

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Reading**2.1 Cloze Reading**

Reading is an art and it is also a great skill which each and every one of us should develop in order to be a good reader. Reading is one of the major skills of communication

Reading comprehension tests are designed to measure the ability to analyze, evaluate, interpret and understand the material that you read. Each type of reading comprehension tests will include selections from various fields such as literature, science, biology and philosophy.

Both selection and questions will vary in difficulty. Always remember to base your response on what is actually stated or implied in the passage. Following are sample passages followed by questions in three sections.

Read the following passage and answer the questions at the end of it

Professor Gavraud is an engineer who almost gave up his post at an institute in Marseilles because he always felt ill at work. He decided against leaving when he discovered that the recurrent attacks of nausea only worried him when he was in his office at the top of the building. Thinking that there must be something in the room that disturbed him, he tried to track it down with devices sensitive to various chemicals, and even with a Geiger counter, but he found nothing until one day, just as he was about to give up, he leaned back against the wall. The whole room was vibrating at a low frequency. The source of this energy turned out to be an air-conditioning plant on the roof of the building across the way, and his office was the right shape and the right distance from the machine to resonate in sympathy

with it. It was this rhythm, at seven cycles per second that made him sick.

Fascinated by the phenomenon, Gavraud decided to build machines to produce infrasound so that he could investigate it further. In casting around for likely designs, he discovered that the whistle with a pea in it issued to all French gendarmes produced a whole range of low-frequency sounds. So he built a police-whistle six feet long and powered it with compressed air. The technician who gave the giant whistle its first trial fell down dead on the spot. A post-mortem revealed that all his internal organs had been mashed into a jelly by the vibrations.

Gavraud went ahead with his work more carefully and did the next test out of doors, with all observers screened from the machine in a concrete shelter. When all was ready, they turned the air on slowly -and broke the windows of every building within a half mile of the test site. Later they learnt to control the strength of the infrasound generator more effectively and designed a series of smaller machines for experimental work. One of the most interesting discoveries to date is that waves of low-frequency can be aimed and that two generators focused on a particular point even five miles away produce a resonance that can knock a building down as effectively as a major earthquake. These frequency-7 machines can be built very cheaply.

A) Choose the correct answer :

- (i) Professor Gavraud fell ill because
 - 1) there were chemicals in his room
 - 2) his office was too high up
 - 3) he was affected by vibrations
 - 4) he was a very sensitive man.
- ii) He constructed a very large copy of a police whistle because he wanted to
 - 1) produce low-frequency sounds

- 2) improve its design
 - 3) compare it with an organ
 - 4) see the effect it had on people.
- iii) The first experiment with the machine
- 1) caused a major earthquake
 - 2) broke all the windows in nearby buildings
 - 3) made a noise like an organ
 - 4) killed the man who switched it on.
- iv) Which of the following precautions was not taken by Professor Gavraud in his second experiment ?
- 1) The observers were protected by a concrete shelter
 - 2) The experiment was done outside
 - 3) The compressed air was turned on slowly
 - 4) A smaller machine was used.

B) Mention whether the following statements are True or False :

- i) Professor Gavraud left his job because he felt sick.
- ii) The cause of the sickness was not in his room.
- iii) The air-conditioning plant had nothing to do with his sickness.
- iv) The result of the first trial was worrying.
- v) He did his second test indoors.
- vi) Later on he designed even bigger generators.

C) Choose the definition which best fits these words or phrases as they are used in the text :

1. infrasound
 - a. high frequency sound
 - b. low frequency sound
 - c. medium frequency sound
 - d. heavy frequency sound

2. to track down
 - a. to smell
 - b. to detect
 - c. to examine
 - d. to remove
3. to give up
 - a. to go on
 - b. to stop
 - c. to collapse
 - d. to find out
4. turned out to be
 - a. was shown to be
 - b. was intended to be
 - c. was thought to be
 - d. was known to be
5. casting around
 - a. looking for
 - b. hoping for
 - c. asking for
 - d. sending for
6. went ahead
 - a. delayed
 - b. proceeded
 - c. hurried
 - d. changed

Read the following passage and answer the questions that follow :

Ozone, a molecule made up of three atoms of oxygen, comprises a layer of the atmosphere that absorbs harmful ultraviolet radiation from the sun. Chlorine atoms, mainly from man-made chlorofluorocarbons or CFCs, break apart ozone molecules.

Chlorine compounds used in human activities such as electronics, manufacturing and refrigeration are a primary cause of the ozone hole. A large area of intense ozone depletion occurs annually over Antarctica during late August through yearly October. The hole typically breaks up as ozone levels increase in late November.

The atmospheric ozone layer over Antarctica declined to record low levels this year due to the combination of an unusually cold winter and the continued presence of man made chlorine chemicals reported by US scientists. The surface area covered by the so called 'ozone hole' in 1993 over 23 million square kilo meters or about twice the size of the Antarctica land mass, was nearly as large as the record 1992 ozone hole.

Instrument, a Russian satellite orbiting the earth, measured the concentration of ozone over a region near the South Pole at less than 100 Dobson units. This measurement made at the center of the ozone hole was confirmed by balloon and ground based instruments.

A Dobson unit is a measure for the physical thickness of the ozone layer. The balloon born measurements also indicated that the Antarctica ozone layer was totally destroyed between the altitudes of 13.5 and 19 kilo meters, creating an ozone void of 5.5 kilo meters thick.

Deep ozone holes will continue to form annually into the next century, 'Herman' an American scientist said, 'this situation will persist until the stratospheric chlorine levels decrease.

The ozone layer is expected to heal itself and become thicker as a result of CFC cutbacks, mandated by an international treaty called the Montreal Protocol.

A) Mention whether the following statements are True or False :

1. Ozone is helpful in the process of absorbing certain radiation creating bad effect.
2. Ozone depletion never takes place in the universe.
3. The 1993 Ozone hole is considered to be the largest as per the world record.
4. Dobson units are used for measuring the effects of danger of ozone.
5. The formation of ozone holes is due to the fact that the stratospheric chlorine levels come down.
6. It is preconceived that the ozone layer would be made alright in future.

B) Read the passage carefully and then choose the responses which best reflect the meaning of the text :

- i) Ozone layer is found
 - a) near the north pole
 - b) near the south pole
 - c) as a sheet of the atmosphere
 - d) at both south pole and north pole
- ii) The ozone molecules break apart due to
 - a) the ultra violet radiation
 - b) the heat of the sun
 - c) the planetary movements
 - d) the chemicals made by man
- iii) Ozone depletion occurs annually
 - a) in many places in the world
 - b) in the coastal areas
 - c) only in certain places
 - d) near forest areas
- iv) As per the latest record pertaining to the ozone layer this year
 - a) the levels are high
 - b) the levels are low
 - c) the levels have functions
 - d) the levels are intermediary
- v) The formation of the ozone hole
 - a) is yet to be proved
 - b) has been proved
 - c) cannot be proved
 - d) can be proved only after Sometime

B) Choose the meaning which best fits the following words as they are used in the text :

1. radiation
 - a. gathering
 - b. spreading out
 - c. accumulating
 - d. penetrating

2. depletion
 - a. production b. removal
 - c. moisturisation d. reduction
3. decline
 - a. becoming weaker
 - b. becoming thicker
 - c. becoming stronger
 - d. becoming rough
4. altitude
 - a. length b. breath
 - c. height d. circumference

Read the following passage and answer the questions that follow :

In the eighteenth century one of the first modern economists, Adam Smith, thought that the 'whole annual produce of the land and labour of every country' provided revenue to 'three different orders of people: those who live by rent, those who live by wages, and those who live by profit'. Each successive stage of the industrial revolution, however, made the social structure more complicated.

Many intermediate groups grew up during the nineteenth century between the upper middle class and the working class. There were small-scale industrialists as well as large ones, small shopkeepers and tradesmen, officials and salaried employees, skilled and unskilled workers, and professional men such as doctors and teachers. Farmers and peasants continued in all countries as independent groups.

In spite of this development, one of the most famous writers on social class in the nineteenth century, Karl Marx, thought that there was tendency for society to split up into huge class camps, the bourgeoisie (the capitalists) and the proletariat (the workers). Influential as was Marx's theory of social class, it was much over-

simplified. The social make-up of modern societies is much more complex than he suggested.

During the nineteenth and early twentieth centuries the possession of wealth inevitably affected a person's social position. Intelligent industrialists with initiative made fortunes by their wits, which lifted them into an economic group far higher than that of their working-class parents. But they lacked the social training of the upper class, who despised them as the 'new rich'.

They often sent their sons and daughters to special schools to acquire social training. Here their children mixed with the children of the upper classes, were accepted by them, and very often found marriage partners from among them. In the same way, a thrifty, hardworking labourer, though not clever himself, might save for his son enough to pay for an extended secondary school education in the hope that he would move into a for an extended secondary school education in the hope that he would move into a 'white-collar' occupation, carrying with it a higher salary and a move up in the social scale.

The tendency to move down in social class is less obvious, for a claim to an Aristocratic birth, especially in Europe, has always carried a certain distinction, and people have made tremendous efforts to obtain for their children the kind of opportunities they had for themselves.

In the twentieth century the increased taxation of higher incomes, the growth of the social services, and the wider development of educational opportunity have considerably altered the social outlook. The upper classes no longer are the sole, or even the main possessors of wealth, power and education, though inherited social position still carries considerable prestige.

Many people today are hostile towards class distinctions and privileges and hope to achieve a classless society. The trouble is that as one inequality is

removed, another tends to take its place, and the best that has so far been attempted is a society in which distinctions are elastic and in which every member has fair opportunities for making the best of his abilities.

A) Write the response which best reflects the meaning of the text :

- (i) Adam Smith's eighteenth century definition of class was invalidated by
 - 1) Karl Marx
 - 2) The nineteenth century working class
 - 3) The social influence of farmers and peasants
 - 4) Successive stages of the industrial revolution.
- (ii) During the nineteenth century, many intermediate groups grew up
 - 1) Between the upper class and the middle class
 - 2) Between the working class and the upper middle class
 - 3) Within the working class
 - 4) Within the aristocracy.
- iii) The writer regards doctors and teachers as
 - 1) Middle class
 - 2) Working class
 - 3) Upper class
 - 4) Independent groups outside society
- iv) Karl Marx developed his two-class theory
 - 1) In spite of the farmers and peasants
 - 2) Even though new sub-classes were appearing in his day
 - 3) Making special allowance for doctors and salaried employees
 - 4) With reference to European societies only.
- v) Marx's theory of social class was
 - 1) Oversimplified by the bourgeoisie
 - 2) Influential because it was oversimplified

3) Influential in spite of being oversimplified

4) Not widely known in the nineteenth century

iv) The 'new rich'

1) Often married into the upper class

2) Despised the upper class

3) Were often men of initiative and intelligence

4) Seldom allowed their children to mix with upper class.

B) Mention whether the following statements are True or False :

- i) The children of the 'new rich' despised their parents.
- ii) A 'white-collar' occupation represents social advance for a labourer's son.
- iii) In the twentieth century class differences have been partly smoothed out by taxation, social services and education.
- iv) Though a classless society has yet to be perfected, an attempt has been made to provide equal rights.

C) Choose the definition which best fits these words or phrases as they are used in the text :

- 1. Successive
 - a. successful
 - b. following
 - c. increasing
 - d. yearly
- 2. Intermediate
 - a. in between
 - b. vague
 - c. uncertain
 - d. of average difficulty
- 3. Camps
 - a. villages
 - b. sections
 - c. tent sites
 - d. holiday accommodation
- 4. Make-up
 - a. composition
 - b. progress
 - c. disguise
 - d. cosmetics

5. Thrifty
- a. cunning b. thirsty
 - c. quick-witted d. careful with money
6. Elastic
- a. made of rubber
 - b. tightly constricting
 - c. long lasting
 - d. not too rigid

Read the following passage and answer the questions that follow it.

The latest buzz word in the continuing debate about the environment is 'sustainable management' - that means using plants and animals for our own benefit, but ensuring that enough are left alive to guarantee the survival of the species. This sounds good, but is it practical in reality ? In spite of years of scientific research, no-one really knows how much damage human beings are doing to their environment. We know that they are responsible for many problems ranging from global warming to ozone depletion, and there is no doubt that they have a devastating effect on animal and plant life on Earth.

About 50,000 animal and plant species are becoming extinct every year. All species depend in some way on one another for survival. If you remove one species from this complex web of interrelationships, we have little idea of the repercussions on the ecosystem in general.

What makes things more complicated is the fact that unlike global warming - which, if the political will was there, could be reduced by cutting gas emissions - preserving bio-diversity remains a difficult dilemma.

There are also questions about whether sustainable management is practical as far as protecting areas of great bio-diversity such as the world's tropical forests are concerned. In theory, the principle should be the same as with elephants; i.e. to cut a number of trees, but not so many as to completely destroy the forest.

Sustainable management of trees requires controls on the number of trees which are cut down as well as investment in replacing them. Most tropical forests exist in poor countries which depend on logging to make money. For most loggers in these countries, making money means cutting down as many trees as possible in the shortest time. The price of trees remains stable, varying by 4-5 % annually, whereas interest rates in most developing countries can create 15 % or more in returns. It therefore makes little sense, and certainly no economic sense, to delay tree-felling.

One solution could be to insist that wood comes from sustainably managed forests. In theory, consumers would buy only this wood and force logging companies to go "green" or else out of business. Unfortunately, unrestricted logging is more profitable than wood from sustainably managed forests which would cost up to 5 times more to control. Consumers would not be prepared to pay the extra sum just to protect the environment.

The sad fact is that there is no practical solution to protecting vegetation and wildlife of tropical forests in the future. It is estimated that these forests contain anything from 50 to 90 per cent of all animals and plant species on Earth. In one study of a 5 km square area of rain forest in Peru, for example, scientists counted 1,300 species of butterfly and 600 species of bird. In the entire USA only 400 species of butterfly and 700 species of bird have been recorded. Sustainable management represents a gigantic experiment. If this doesn't work, we can't move to another planet to escape. It's a case of one planet, one experiment!

Complete the following statements choosing from one of the given alternatives :

1. The extent of the damage being inflicted on our environment...
 - a. can be estimated by years of scientific research.
 - b. is being calculated by scientific research exactly.
 - c. is impossible to assess despite years of scientific

- research.
- d. is, thanks to years of scientific research, on the decrease.
2. The term 'sustainable management' means using plants and animals for our own benefit, but..
- a. assuring none are left alive to guarantee the survival of the species.
- b. making sure that enough are left alive to guarantee the survival of the species.
- c. take care of the survival of the species.
- d. make certain they are not all used up.
3. If a particular species becomes extinct...
- a. we know exactly what effect it will have on our ecosystem.
- b. we have little knowledge about its effects on our ecosystem.
- c. it has no relationship with other species in our ecosystem.
- d. its removal from the ecosystem will have no repercussions.
4. Preserving bio-diversity in our ecosystem...
- a. is less complicated than reducing global warming.
- b. can be resolved politically, just like global warming.
- c. is not simply a political dilemma to be resolved like global warming.
- d. can be resolved only by cutting gas emissions.
5. Applying the theory of sustainable management to the protection of tropical forests...
- a. is creating worries and doubts in people's minds, especially as regards its feasibility.
- b. means you can cut as many trees as you want without destroying the forest.
- c. is a practical and economical way of protecting them.

- d. is exactly the same as that applied to protecting elephants.
6. It is vital to protect the wildlife of tropical forests...
- a. because there are over 700 species of bird recorded in the whole of the USA.
- b. because sustainable management offers a real, practical solution.
- c. because scientists couldn't find as many species of butterfly or bird in the Peruvian rainforests.
- d. because of the wide variety and quantity of species of wildlife that inhabit them.

B. Choose the option that best represents the meaning of the following words as they are used in the text.

1. depletion
- a. fatigue b. reduction
- c. deficiency d. emptiness
2. repercussion
- a. sequence b. purpose
- c. consequence d. conclusion
3. dilemma
- a. predicament b. hesitation
- c. status d. contingency
4. returns
- a. grant b. inheritance
- c. acquisition d. gain
5. devastating
- a. extreme b. diverse
- c. disastrous d. dangerous
6. complex
- a. difficult b. intricate
- c. hard d. tough

C. State whether the following statements are true or false.

1. Most of the tropical forests are located in economically backward countries.
2. Tropical forests house less than half of the plant and animal species on Earth.
3. Human beings are not really responsible for the damage to the environment.
4. Wood from sustainably managed forests is cheaper than wood from forests where unrestricted logging is permitted.

Read the passage carefully, and then answer the following questions.

Getting a chocolate out of a box requires a considerable amount of unpacking: the box has to be taken out of the paper bag in which it has arrived; the cellophane wrapper has to be torn off, the lid opened and the paper removed; the chocolate itself then has to be unwrapped from its own piece of paper. It is now becoming increasingly difficult to buy anything that is not wrapped in cellophane, polythene, or paper.

The package itself is of no interest to the people, who usually throw it away immediately. Useless wrapping accounts for much of the heap of garbage in the streets. So why is it done ? Some of it, like the cellophane on meat is necessary, but most of the rest is simply competitive selling. This is absurd. Packaging is using up resources and messing up the environment.

Little research is being carried out on the costs of alternative types of packaging. Just how possible is it, for instance, for local authorities to salvage paper, pulp it, and recycle it as egg-boxes ? Would it be cheaper to plant another forest ? Paper is the material most used for packaging - but very little is recycled.

A machine has been developed that pulps paper then processes it into packaging, e.g. Egg-boxes and cartons. This could be easily adapted for local use. It would

mean that people would have to separate their refuse into paper and non-paper, with a different dustbin for each. Paper is, in fact, probably the material that can be most easily recycled; and now, with massive increases in paper prices, the time has come at which collection by local authorities could be profitable.

Recycling of this kind is already happening with milk bottles, which are returned to the dairies, washed out, and refilled. But both glass and paper are being threatened by the growing use of plastic. More and more dairies are experimenting with plastic bottles. If all the milk bottles necessary were made of plastic, then British dairies would be producing the equivalent of enough plastic tubing that would encircle the earth every five or six days!

The trouble with plastic is that it does not rot. Some environmentalists argue that the only solution to the problem of ever growing mounds of plastic containers is to do away with plastic altogether in the shops, a suggestion unacceptable to many manufacturers who say there is no alternative to their handy plastic packs.

More research is needed for the recovery and re-use of various materials and for the cost of collecting and recycling containers as opposed to producing new ones. Unnecessary packaging, that is used just once, can be avoided. But it is not so much a question of doing away with packaging as using it sensibly. What is needed now is a more sophisticated approach to packaging. Let it be simplified to a considerable extent to minimize land pollution.

Choose the response which best reflects the meaning of the text.

1. The 'local authorities' are
 - a. the Town Council
 - b. the police
 - c. the paper manufacturers
 - d. the most influential citizens.

2. If paper is to be recycled
 - a. more forests will have to be planted.
 - b. the use of paper bags will have to be restricted.
 - c. people will have to use different dustbins for their rubbish.
 - d. the local authorities will have to reduce the price of paper.
3. British dairies are
 - a. producing enough plastic tubing to go round the world in less than a week.
 - b. giving up the use of glass bottles.
 - c. increasing the production of plastic bottles.
 - d. re-using their old glass bottles.
4. The environmentalists think that
 - a. more plastic packaging should be used.
 - b. plastic is the most convenient form of packaging.
 - c. too much plastic is wasted.
 - d. shops should stop using plastic containers.
5. The author thinks that
 - a. the function of packaging is not important.
 - b. people will soon stop using packaging altogether.
 - c. not enough research has been done into the possibilities of recycling.
 - d. the cost of recycling is so great that it is better to produce new materials than use old ones.

State whether the following statements are true or false.

1. Too many products nowadays are wrapped in unnecessary packaging.
2. The countryside is being spoilt by the overproduction of packaging.
3. It is possible to use paper again.
4. The rising price of paper will make it worthwhile for local authorities to collect waste-paper.
5. Plastic is difficult to destroy.

Choose the meaning or explanation which best fits the context in which it is used.

1. confined
 - a. used for
 - b. restricted to
 - c. needed for
 - d. suited to
2. accounts for
 - a. makes up
 - b. compensates for
 - c. is recovered from
 - d. is kept out of
3. messing up
 - a. spoiling
 - b. altering
 - c. improving
 - d. poisoning
4. recycled
 - a. reduced
 - b. reproduced
 - c. re-used
 - d. retailed
5. handy
 - a. attractive
 - b. easy to hold
 - c. convenient
 - d. easy to destroy
6. So why is it done ?
 - a. Why do people buy things they don't need ?
 - b. Why is so much wrapping thrown away ?
 - c. Why do the shops try to sell things people don't want ?
 - d. Why is so much unnecessary wrapping used ?

Read the following report and answer the questions that follow it :

It has always been clear, of course that a properly designed media programme uses press, posters, printed leaflets, and so on in proportions suitable to the nature of the product itself. In such a programme television occupies a relatively important place if the product is sold in small quantities, at a low price to the vast mass of the people. It is regarded as a quick acting medium, peculiarly suited to prompting 'impulse purchases'. Larger items, such as cars and refrigerators, may be more profitably advertised in the press or other media

which are examined in greater detail and more at leisure than television 'commercials' can possibly be. Nevertheless, in most mass advertising campaigns, the media are used in combination with each other, in proportions which tend to be more and more carefully, and even scientifically, determined.

It is significant, in this connection, that the poster medium and outdoor advertising generally, are now staging something of a recovery, after sustaining what at first looked like being a severe blow at the time of the introduction of commercial television into the United Kingdom in 1955.

Media planning is only one of the branches of the British advertising business, where more exact methods of measurement and the close study of statistical data have made considerable headway in recent years. The marketing and research departments of the advertisers themselves, and of the agents who act as middlemen between advertisers and media owners in the case of more than 50 percent of British advertising business, are constantly expanding. These departments have for sometime included a number of University graduates. Usually with particular qualification in statistics and the movement of University trained men into advertising, the business is growing as is the study of advertising problems in the universities themselves, particularly in the departments of economics, psychology and sociology.

A) Read the text and complete the following sentences choosing one of the options given below each sentence :

1. A properly designed media programme uses
 - a) television – if the commodity is produced on a large scale.
 - b) different sources of media according to the type of the product.
 - c) a media which depends on the impulse.

2. The producers advertise larger items
 - a) on television 'commercial' to appeal to the people.
 - b) in press so that the customer may see details leisurely.
 - c) to make profit through poster advertisement
3. The poster medium and outdoor advertisement
 - a) were started in the United Kingdom in 1955.
 - b) are again becoming popular these days.
 - c) nowadays depend upon commercial television.
4. British advertising business
 - a) is one of the branches of media planning.
 - b) has a close study of roads and ways in recent years.
 - c) studies closely measuring methods of advertisement.
5. The marketing and research departments of advertisers
 - a) have employed a number of university graduates.
 - b) have appointed 50 percent middlemen.
 - c) have started departments of economics, psychology and sociology.
6. The advertising agents act as middlemen between
 - a) university students and advertisers.
 - b) media owners and economists.
 - c) those who are interested in advertising and those who own the media.

B) Give the most suitable meanings of the following words as they are used in the text choosing from the lists given below

1. Nevertheless
 - (i) never before (ii) never (iii) however
2. severe blow
 - (i) air (ii) a hard hit (iii) a fight

3. sociology
 - (i) a study of ecology
 - (ii) a study of the nature and development of society
 - (iii) a study of the history of a nation
4. headway
 - (i) progress in difficult circumstances
 - (ii) the path of the leader
 - (iii) the movement of one's head.
5. in proportions
 - (i) in parts
 - (ii) in correct relation to other things.
 - (iii) in proper terms.
6. a close study
 - (i) a thorough, detailed study
 - (ii) a study of secret material
 - (iii) the end of reading

C) Read the text and answer the following questions :

1. What are the different media available for advertising products ?
2. When were the poster medium and outdoor advertising affected terribly ?
3. What are the reasons for the growth in advertising ?

Speaking and Writing

2.2 Process Description

A Process description should be a precise description of events occurring over time that lead to some outcome or result. Process description describes the steps of a conceptual process. It is the way of attempting to develop the information given in the form of a flowchart or any other pictorial representation or paragraph. The information is presented as a sequence

of items that must be considered in a particular order. A process analysis emphasizes how something is done rather than the ways or the reasons something is done. Your observations should be clear so that someone who doesn't know or seen the process can follow your description. Here are few tips to for process description :

- Understand the process and procedure carefully.
- Give an introduction that clearly states the topic sentence.
- Introduce and explain all the steps in the process, giving specific details.
- Classify the step/s and organize the steps in sequence, classifying major and minor steps if necessary.
- Include brief mechanism descriptions for any components that may be involved.
- Use the passive form
- Provide transitions to signal steps and sub-steps and examples.
- End with an appropriate conclusion in which you re-emphasize the benefits, describe the finished product or process, and draw whatever other conclusions are appropriate.
- Check carefully for clarity of expression, logical organization, adequate explanations, unity, and coherence.

For Example :

Calcareous material like limestone marl is one raw material. Argillaceous material like clay/shale is another raw material. Limestone/Marl is crushed and powdered and sent to the storage silos. Clay/Shale passes through washing and reaches the wash basin. The powdered limestone from the storage silos and the clay/shale from the wash basins are proportionately mixed and sent to the unit where they are ground. After grinding, the mixture becomes slurry. The slurry is passed through the correcting basin and the slurry storage tank into the

rotary kiln. Coal, which is crushed and dried and pulverized in the grinding ball mill, reaches the rotary kiln where the slurry is heated. From the kiln, the material reaches the cement clinker from where it reaches the stage for being cooled. After cooling, it passes into the clinker storage from where it reaches the clinker grinding elevators. Gypsum is added at this stage. From the grinding elevators, cement reaches the silos. From the silos, it becomes cement ready to be weighed and packed.

Exercise for Practice :

1. Describe the process of making gold.
2. Describe the process of making bread.
3. Describe the process of taking photocopies.
4. Describe the process of washing machine.
5. Describe the process of interview.

Writing

2.3 Interpretation of Charts

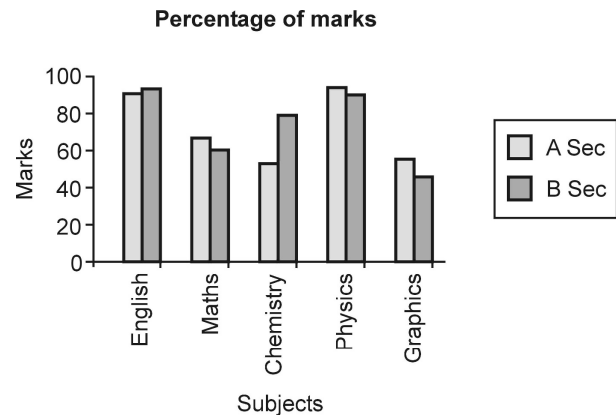
"A picture is worth a thousand words." Graphs or charts help people understand data quickly. Whether you want to make a comparison, show a relationship, or highlight a trend, they help to transfer the information quickly. There are different types of graphs and charts like flowchart, pie chart, bar graph, and so on. To create most charts or graphs, excluding pie charts, you typically use data that is plotted in two dimensions: the horizontal dimension is the x-axis and the vertical dimension is the y-axis.

Bar Graphs

Bar graphs show relationships between different data series in the spaced bars horizontally or vertically. Here the height of the bar represents the measured value or frequency: The higher or longer the bar, the greater the value. Legends are used to list the variables appearing

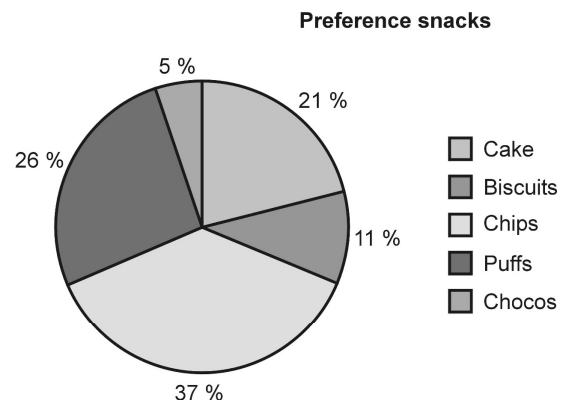
in the chart and an example of their appearance. This information allows the data from each variable to be identified in the chart.

For example :



Pie Charts

A pie chart compares parts to a whole. As such it shows a percentage distribution. The entire pie represents the total data set and each segment of the pie is a particular category within the whole. So, the pie chart is used for measuring the data, which depicts a ratio or percentage relationship. For example:

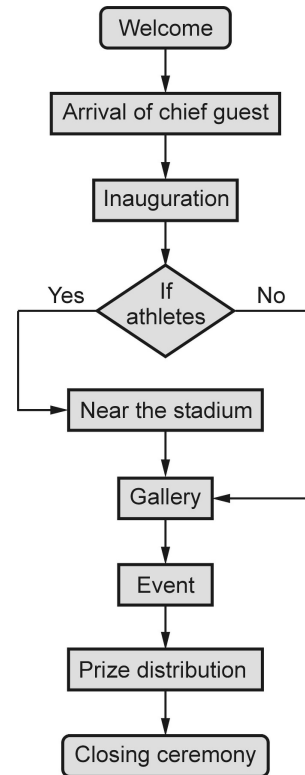


Flow chart :

Flowcharts are helpful in understanding a complicated process. This is especially true if you have to make decisions and do different steps depending on those decisions. By looking at a flowchart you can visually follow different paths through the chart. Here are some guidelines to draw a flowchart :

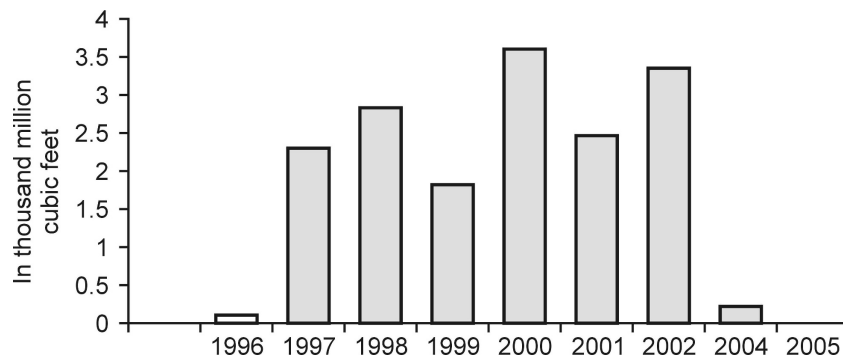
- All flowcharts start and end with the terminator or terminal shape like a rounded rectangle.
- To show the flow arrow mark is used.
- Decision shape is used to ask a question. For example: "Are you under 50 years of age ?" If you are less than 50 years old, you follow the arrow going down out of the decision shape. If you are 50 or older, you follow the arrow to the right.
- The rectangle is used for activities or action steps that must be done.
- A circle containing a letter or number is used to show that it is connected to another chart on a different page.

For example :

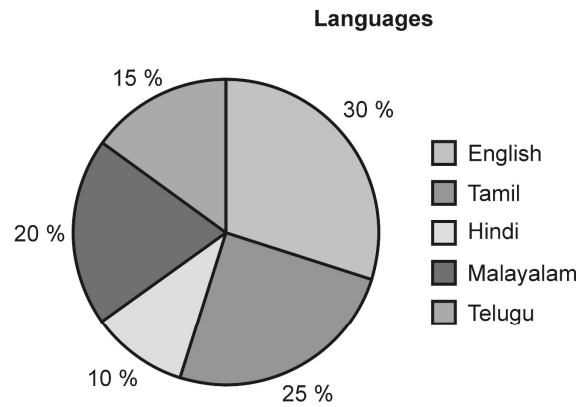


Exercise for Practice :

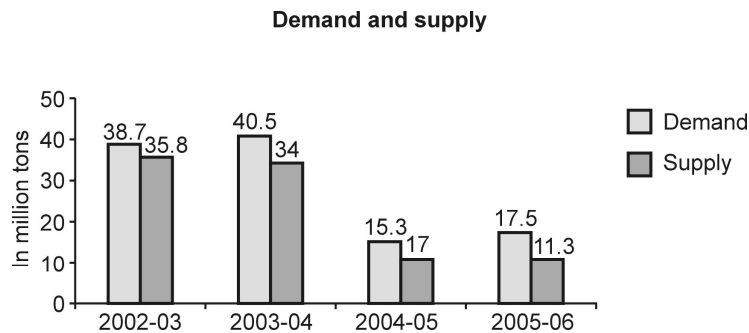
1. Study the following bar chart, which describes the flow of water from Kandaleru between 1996 and 2004. Write a paragraph presenting the information using expressions of comparison.



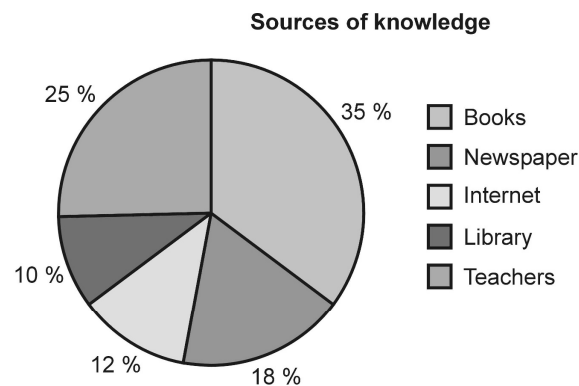
2. Convert the following pie chart into a paragraph :



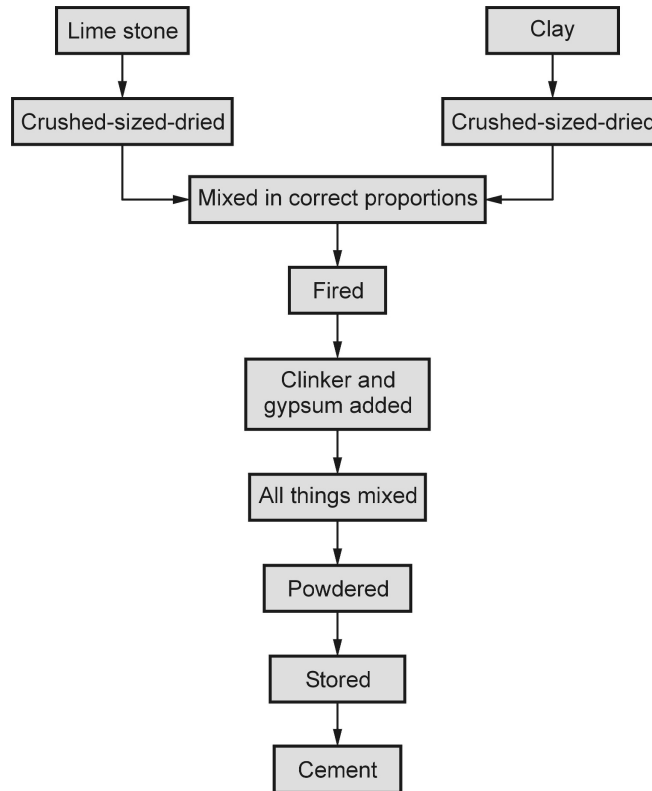
3. Convert the following pie chart into a paragraph :



4. Convert the following pie chart into a paragraph :



5. Convert the following flowchart into a passage :



Grammar

2.4 Voice - Active, Passive, Impersonal

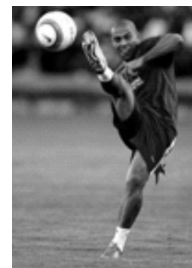
Voice is that form of a verb which shows whether what is denoted by the subject does something or has something done to it. And, the quality of a verb is called its voice. Clearly a verb can have two voices : Active voice and Passive voice. In addition, Impersonal passive voice can also be included in the passive voice.

The verb can express an action in two ways : Giving importance to the Subject (Doer of the action) and giving importance to the Action (rather than its Doer).

Active voice

A verb is in the Active Voice when its form shows that the person or thing denoted by the subject does

something, or in other words, the form of a verb gives more importance to the doer of the action.



Ronaldo kicked the ball.

S V O

Passive voice

A verb is in the Passive Voice when its form shows that something is done to the person or thing denoted by the subject. In Passive voice, the form of a verb gives more importance to the action rather than its doer.



The ball was kicked by Ronaldo.

O V S

Impersonal passive

In Impersonal voice, the person who does the work is not mentioned. Only the action is given importance.



The ball was kicked

O V

Structure of a passive voice

The structure of the **passive voice** is very simple :

Subject + auxiliary verb (be) + main verb (past participle)

The main verb is **always** in its past participle form.

We always use **by** to introduce the **passive object**. But, in some cases it is omitted. Look at the following sentence :



She was killed **with** a knife.

Normally we use **by** to introduce the passive object. But the knife is not the active subject. The knife did not kill her. She was killed **by** somebody **with** a knife. In the active voice, it would be: Somebody killed her **with** a knife. The knife is the instrument. Somebody is the "agent" or "doer".

I. Change the following sentences into Passive voice :

1. The traffic police stopped every bike at this junction.
2. The painters are painting on the walls.
3. Tagore wrote an offering poem.
4. The Chairman inaugurated the symposium.
5. Multinational companies make huge investments in oil-rich countries.
6. Pedal power needs a great amount of human power.
7. Somebody has stolen the helmet.
8. He gave up his clerical post last week.
9. She spoke French fluently.
10. He bought some saplings for the garden.
11. He is reading a story book.
12. They were singing a beautiful song.
13. We listen to music every day.
14. He teaches Technical English.
15. They wear Pink dress.
16. They pay a lot of money.
17. You do not write the letter.
18. Does the police officer catch the thief ?
19. She doesn't open the book.
20. I draw a picture.

II. Change the following sentences into Active voice :

1. This project must be finished by this month.
2. She will be punished for her mistake.
3. He is not liked by anyone.

4. Many people have been ruined by drinking.
5. Nothing has been done by them till now.
6. All bad habits were being given up by him.
7. The fire was being lighted by the manager.
8. A hard life is being lived by us.
9. Caesar was praised by the mob.
10. Open the door gently.
11. These mobile phones are produced in China.
12. Lots of houses were destroyed by the earthquake.
13. Hebrew is spoken in Israel.
14. The assignment must be completed by next Monday.
15. Lectures are recorded and posted on the Internet

III. Change the following sentences into Impersonal

Passive voice :

1. My sister has drawn this picture.
2. Everyone will play the game.
3. We can use coal to produce detergents, explosives and paints.
4. They were giving lots of problem.
5. We can motorize the pump.
6. Avoid cell phone while driving.
7. Someone has denoted their eyes.
8. He bought the computer from your company.
9. I saw him opening the seal.
10. Hardy wrote a controversial novel.
11. A letter was written to him.
12. The motorist was badly hurt.
13. The table is set by us.
14. We don't help you.
15. She opens the door.

Language Development

2.5 Numerical Adjective

Numerical Adjective is defined as a number used as an adjective; either a cardinal adjective (such as one) or an ordinal adjective (such as first) When Numerical expressions are used as adjectives, singular form is used before the noun.

For example : 'A journey of 200 miles' is changed as 'a 200 mile journey'.

Exercise for Practice

Give the numerical expressions for the following :

1. A can with a capacity of 10 liters
2. A budget estimate of 10 lakhs
3. A project for 5 years
4. A motor bike of 100 kilograms
5. A journey of 2500 Kilometers
6. a drive of 7 hours
7. a D.C supply of 240 volts
8. a committee of 5 members
9. a lamp of a power of 100 watts
10. a cricket match lasting three days
11. at intervals of 15 minutes
12. an investment of ₹ 3,00,000
13. a stick of 7 inches
14. a container with a capacity of 5000 liters
15. a walk of two kilometers
16. a book with a value of ₹.20
17. an expedition lasting for five days
18. a meeting lasting for two hours
19. a pipe of ten feet long
20. a kingdom of 1000 years



UNIT - III

3

Technical Writing and Grammar

Syllabus : **Listening**– Listening to classroom lectures/ talks on engineering/technology –**Speaking** – introduction to technical presentations- **Reading** – longer texts both general and technical, practice in speed reading; Writing-Describing a process, use of sequence words- **Vocabulary Development**- sequence words- Misspelled words. **Language Development**- embedded sentences.

Contents

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3.2 Technical Presentation	3 - 5
3.3 Writing and Speaking Activity	3 - 9
3.4 Describing a Process	3 - 9
3.5 Sequencing Words	3 - 10
3.6 Embedded Sentences	3 - 12
3.7 Misspelled Words.....	3 - 13
3.8 Speed Reading	3 - 14

Technical writing is a type of writing where relevant, useful and accurate information are written specifically to a targeted audience in order to achieve special goal. It is clear and straight forward writing. The main features of technical writing are precise terminology, logical flow, illustrated with suitable verbal or visual representation, careful attention to grammar, punctuation, and usage. The major types of documents in technical writing can be grouped into four major :

1. Reports and communications in day-to-day business
2. Technical papers, magazine articles, books, and thesis for purposes of education, teaching, and the sharing of information and knowledge.
3. Patents
4. Operational manuals, instructions, or procedures

Good Technical writing doesn't happen overnight; it requires planning, drafting, rereading, revising, and editing.

Listening and Writing

3.1 Classroom Lecture

Listen to the lecture by a professor of Natural History

Professor : Now, as a part of our study of biological evolution and evolutionary processes, let's look for a few minutes at an extraordinary group of bird species, the Birds of Paradise. You may've seen pictures of some of these fantastic birds -- I think there's one in the next chapter of our textbook. The male Birds of Paradise are incredibly beautiful creatures. They have extremely elongated and very elaborate sets of many-coloured feathers arising from their head and tail and wings, and when the males display for the females during courtship, they can erect and manipulate these feather tracts, waving or shaking or twirling or wiggling these feathers. And at the same time they often assume very odd postures or do acrobatics - so they put on quite incredible performances to attract females.

In fact, the male plumage is so gorgeous that Bird of Paradise skins have been highly valued trade items for hundreds, if not thousands, of years. The Birds of Paradise are restricted almost entirely to the tropical jungles of the New Guinea archipelago, to the large island of Papua-New Guinea and its surrounding islands. Not only have the Papuan men traditionally adorned themselves with Bird of Paradise feathers since before history, but these feathers appeared as rare and valuable trade goods in other parts of Asia as long as two thousand years ago.

However, they weren't discovered by the Western world until the sixteenth century. In 1520, the famous Portuguese explorer, Ferdinand Magellan, was given several Bird of Paradise skins by the Sultan of Batchian- in the Moluccan Islands- and they created quite a sensation back in Europe. As exploration expanded, more and more skins were sent to the United States and Europe, and the beauty of the feathers resulted, of course, in their becoming fashionable decorations for ladies' hats. By the end of the nineteenth century, thousands of trade skins had been exported from New Guinea. Through London alone, between the years 1904 and 1908, 155,000 skins were imported.

Luckily, it was about this time that groups like the Audubon Society and the Royal Society for the Protection of Birds were becoming active defenders of wildlife, and from 1908, laws banning the import of bird feathers were beginning to be passed in many countries. In 1955, the government of Nepal was having difficulty getting new Bird of Paradise plumes for the Royal Nepali crown for the coronation of their new King, Mahendra, until they finally arranged for replacements from an illegal shipment of skins that had earlier been confiscated by the US Customs Service.

At last, in 1990, Indonesia itself passed a law banning the trade in Bird of Paradise skins. Incredibly, none of the Birds of Paradise are Endangered species today, although several are on the Vulnerable list and on the Near Threatened list. Today, only sustainable hunting

for ceremonial purposes is permitted to the local native tribes.

There's about forty species of Birds of Paradise, and they're really outstanding examples of the evolutionary phenomenon of species radiation from a single ancestor, because each isolated mountain range in the New Guinea archipelago has its own unique, endemic species - species that are found nowhere else in the world. The Birds of Paradise are all very closely related- actually, they're all closely related to our common crows!- but each species has evolved in isolation into something that looks and behaves very different from its relatives on the next mountain or in the next valley. In fact, elevation is probably the single most important ecological sorting mechanism for the adaptive radiation of these birds into so many different, unique forms.

On top of their extraordinary plumage, these birds have also developed a whole range of breeding strategies. A few species are monogamous - which means that one male and one female mate and raise young. But most species are polygamous, where the males try to attract and mate with as many females as possible, and the females raise the young birds alone. Some of these polygamous males perform single, non-territorial displays when they find a female. In other cases, the single male frequents some sort of regular display ground, called a 'court', where he may clear a space and perform for passing females. And in yet other species, the males gather at distinctive, traditional, communal display grounds called 'leks'. Here, many males will compete for female attention and perform as energetically as they can, because the females choose the ones who put on the best show. The native Papuans call these performances 'sakaleli' or 'dancing parties', and they are truly amazing exhibitions. Just picture a dazzling gold-white-and-green Greater Bird of Paradise, who leans forward and downward, and lowers his open wings to display his large, lacy, golden

flank feathers raised above his back and over his head like Japanese fans. Or the immaculate black-and-turquoise Blue Bird of Paradise, who hangs completely upside-down and flexes his legs slowly and rhythmically to vibrate his long, thin tail feathers for the ladies.

This big, sequential radiation of behaviours and plumages - as well as similar sequential variations in morphology and feeding habits - is a really rich source of research opportunities for graduate students, and I hope that some of you will have the chance to participate in Bird of Paradise research during your careers, because they are amazingly beautiful birds with fascinating habits.

(*Excerpt from the TOEFL test listening conversation)

Exercise :

Listen to the passage and fill the gaps with correct words.

You may've seen pictures of some of these _____-- I think there's one in the next chapter of our textbook. The male Birds of Paradise are _____creatures. They have extremely elongated and very elaborate sets of _____ arising from their head and tail and wings, and when the males display for the females during courtship, they can erect and manipulate these feather tracts, waving or shaking or twirling or wiggling these feathers. And at the same time they often assume very _____ or do acrobatics - so they put on quite incredible performances to attract females.

In fact, the male _____ is so gorgeous that Bird of Paradise skins have been highly valued trade items for hundreds, if not thousands, of years. The Birds of Paradise are restricted almost entirely to the tropical jungles of the _____ archipelago, to the large island of Papua-New Guinea and its surrounding islands. Not only have the Papuan men traditionally adorned themselves with Bird of

Paradise feathers since before history, but these feathers appeared as _____ and _____ trade goods in other parts of Asia as long as two thousand years ago.

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On top of their _____ plumage, these birds have also developed a whole range of breeding strategies. A few species are monogamous - which means that one male and one female mate and raise young. But most species are polygamous, where the males try to attract and mate with as many females as possible, and the females raise the young birds alone. Some of these polygamous males perform single, _____ displays when they find a female. In other cases, the single male frequents some sort of regular display ground, called a 'court', where he may clear a space and perform for passing females. And in yet other species, the males gather at distinctive, traditional, _____ grounds called 'leks'. Here, many males will compete for female attention and perform as energetically as they can, because the females choose the ones who put on the best show. The native Papuans call these performances 'sakaleli' or 'dancing parties', and they are truly _____. Just picture a dazzling gold-white-and-green Greater Bird of Paradise, who leans forward and downward, and lowers his open wings to display his large, lacy, golden flank feathers raised above his back and over his head like Japanese fans. Or the immaculate black-and-turquoise Blue Bird of

Paradise, who hangs completely _____ and flexes his legs slowly and rhythmically to vibrate his long, thin tail feathers for the ladies.

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Reading

3.2 Technical Presentation

Experimental analysis of a single slope single basin solar still with Hot water Provision

Abstract

In this paper, we have worked in design, fabricate and experimental analysis of single slope single basin solar still. These models have been developed based on purified water and hot water. The experimental analysis of a single slope single basin solar still is affected by design and parameters like water temperature, basin liner temperature, hot water temperature, glass cover temperature, ambient temperature and solar intensity. The experimental analysis of the system has been measured 24 hours output values 4.915 kg/m² and hot water 45.500 kg/m². The facile approaches analysis has been carried out for natural circulation of water temperature sunny hour's (11.00 am to 3.00 pm) continuous output temperature 53 °C, respectively. The experimental calculations have been made for one of the typical days under in Chennai at Manimangalam climatic condition.

Keywords : Basin solar still, solar hot water, thermal model efficiency, productivity.

Introduction

Researchers have reviewed the performance of inverted absorber solar still (Rahall Deaet al. 2011) and found that thermal efficiency of inverted absorber solar still is thrice than that of the normal solar still. Tiwari et al., (2007) have studied the comparative performance of an active solar distillation system integrated with FPC, concentrating collector, evacuated tube collector with and without heat pipe and tried to evaluate the theoretical yield. It has been concluded that the still integrated with evacuated tube collectors had shown better results than the other collectors.

Khalifa and Abdul Jabber (2011) have found the effect of condensing cover tilt angle of simple solar still on the productivity in different seasons and latitudes. It has been found that the tilt angle should be large in winter and small in summer.

Kalidasa Murugavel and Srithar [2011] have conducted experiments for the still up to a minimum depth of water and different wick materials like light cotton cloth, sponge sheet, coir mate and waste cotton pieces, and aluminum rectangular fin arranged in different configurations in the basin.

Design of the system

The photograph of the experimental single slope single basin solar still is shown in the Fig. 3.2.1, 3.2.2 and 3.2.3. The still consists of outer and inner enclosure made of plywood with dimension of 1.3 x 1.3 m and 1.25 x 1.25 m. The gap between the enclosures is filled with glass wool having the thermal conductivity of 0.0038 W/mK. The height of the back wall is 0.03 m and front wall of 0.10 m. The glass cover of thickness 4 mm is used as the condensing surface and the slope of the glass cover are fixed as 11° which is equal to the latitude of the location (Chennai). The still is made vapor tight with the help of metal putty. The j-shaped drainage channel is fixed near the front wall to collect the distillate yield and the output trickled down to the measuring jar. The basin of the still is made of copper sheet in the basin and painted black to absorb more solar radiation.



Fig. 3.2.1 Photograph of the experimental still



Fig. 3.2.2 Photograph of the coil fixed in the basin

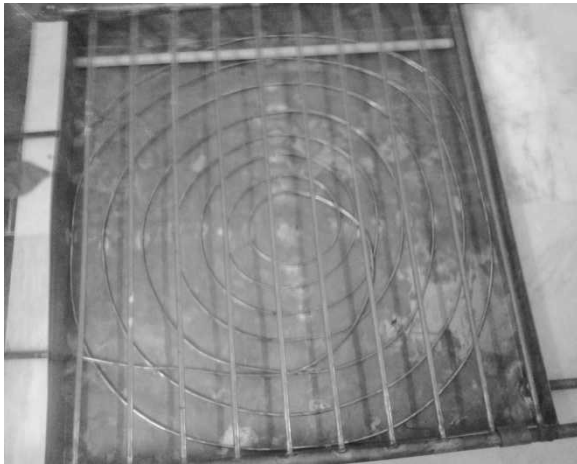


Fig. 3.2.3 Photograph of the coil and drip fixed in the basin

A special arrangement has been made to pour saline water drop by drop in the basin to maintain least water depth. The arrangement is made of heat resistant pipes

with drip button fixed at regular intervals of 0.10 m horizontally in the basin. The single slope single basin solar still was consisting of a copper sheet used for fabricating the still with a water depth of 0.002 m. The basin inner side fixed a copper coil and serpentine heat exchanger made of copper with length 5.0 m and diameter of 0.01m was welded to the upper surface of the still absorber plate. The gold water inlet fixed water flow meter an insulated tank was used as a fluid flowing through the heat exchanger to extract the heat from the saline water inside the basin area of the still under the open cycle continuous flow heating mode in 11.00 am to 3.00 pm. An insulation water tank was fixed at a relatively high place to achieve the required pressure difference needed for water flowing. The hot water outlet was connected to the storage tank via an insulation pipe to minimize heat loss. The basin temperature, saline water temperature, condensing cover temperature of the still and inlet, outlet hot water temperature of the system has been measured by fixing copper-constantan thermocouples which has been calibrated initially. Solar radiation intensity and ambient temperature have been measured with solar radiation monitor and digital thermometer.

Experiment has been carried out from 6 am to 6 am of 24 h duration with compare ordinary basin type still and drip button use basin still for during summer days at Department of Physics, Dhanalakshmi college Engineering, Chennai – 601 301 [latitude 13 ° 04'N, long 80° 17'E], Tamilnadu, India.

Experimental analysis of a single slope single basin solar still

The following assumptions have been made to write the energy absorb in the system.

- (i) There is no temperature gradient throughout the condensing glass cover surface.
- (ii) The system is made vapor tight such that there is no vapor leakage from the still.

- iii) The condensing glass cover and water surface are parallel due to small inclination of the glass cover.
- iv) The hot water is natural circulation mode to the still during sunshine hours in the basin.
- v) The governing heat transfer coefficients in the still are temperature dependent.

Results and discussion

Experiments have been carried out with the single slope single basin solar still for number of days during January 2013 to June 2013. Observations for one of the four typical days in the month of February to May have been used to predict the performance of the system. Hourly variation of solar radiation and ambient temperature for four experimental days has been depicted in Fig. 3.2.4. It is observed that the hourly variation of solar radiation and ambient temperature have same trend. Solar radiation intensity and ambient temperature is found to be maximum at noon and then decreases gradually till 5 pm.

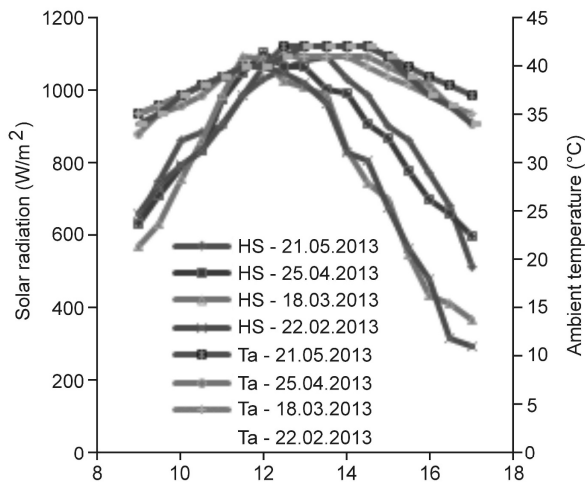


Fig. 3.2.4 Hourly variations of solar radiation and ambient temperature in different days.

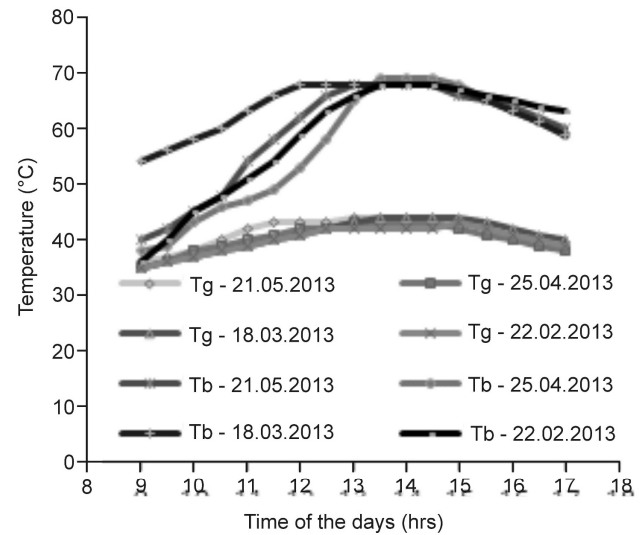


Fig. 3.2.5 Hourly variations of experimental values of basin and glass cover temperature in different days.

The analytical expressions derived for the basin and glass cover temperature have been used to evaluate the instantaneous temperature of the same with the measured climatic and design parameters of the still. The calculated values have been compared with the experimental observations to predict the validity of the thermal model. Fig. 3.2.5 have shown the measured and calculated value of temperature of the basin and glass cover temperature with different days.

In Fig. 3.2.6. Hourly variation of production rate, water and hot water temperature have been taken by dripping saline water with dripping arrangement to maintain least water depth. Experiment dripping has been carried out with 1.5 cm of saline water along the basin. The system has been taken by experimental maximum water temperature 67°C and hot water temperature 53°C.

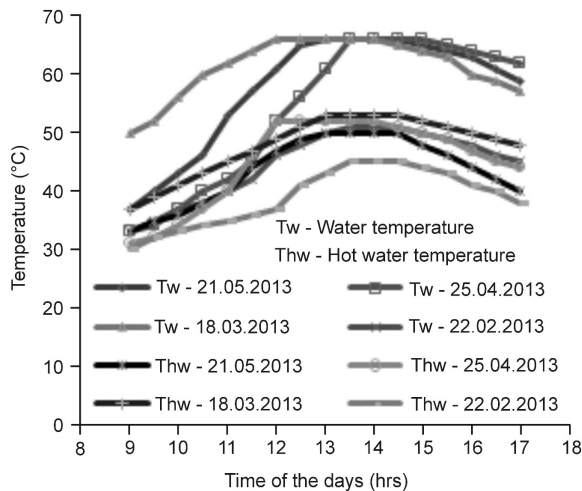


Fig. 3.2.6 Hourly variations of experimental values of water and hot water temperature in different days.

The instantaneous distillate yield and hot water in the basin have been shown in the Fig. 3.2.7. The temperature difference between the water and hot water temperature with dripping is small due to large thermal capacity and the rate of evaporation is moderate. The maximum still is distillate yield of $0.350 \text{ [kg/m}^2\text{]}$ and hot water output $3.455 \text{ [kg/m}^2\text{]}$ 30 minutes obtained between 1.30 pm and 2 pm which is expected. The still is provides a total distillate yield of $4.915 \text{ [kg/m}^2\text{]}$ and hot water $45.500 \text{ [kg/m}^2\text{]}$ from 9 am to 5 pm. Moreover the overall distillate output in 24 hr cycle for the system with by dripping is found to be 5.630 kg/m^2 .

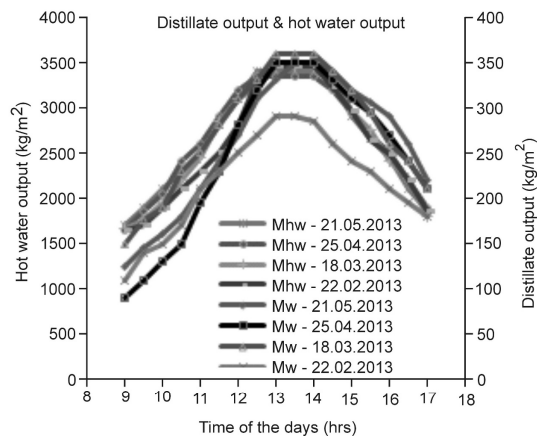


Fig. 3.2.7 Hourly variations of Experimental values of distillate output and hot water

Conclusion

The following conclusions have been drawn and are

- (i) In the case of saline water in the basin, the total production decreases due to large thermal capacity. Dripping of saline water increases the temperature difference between the condensing glass cover and water temperature in the basin due to low thermal capacity.
- (ii) Optimization of the design parameters is possible with the thermal model proposed and can be used for large scale installations
- iii) The overall output of the still is found to be $4.915 \text{ [kg/m}^2\text{]}$ and continuous output temperature 53°C , the estimated production rate is in close agreement with the experimental values.

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Writing and Speaking

3.3. Writing and Speaking Activity

Exercise for Practice :

Make notes of the above article and speak for 2 min with your friend :

[illegible]

Makes notes of any technical article related to your subject and give a detailed description of the article. After completing the description, start narrating it to the class.

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper has a thin black border around its edges.

3.4 Describing a Process

Describing a process involves step by step explanation of any process. Each stage of the process is explained methodologically. The details are described using proper usage of words and mostly adjectives are used. A short introduction is give to the overall topic and each steps involved in the process is narrated using connectives.

For Example :

The process of extracting gold

There are generally two different sources of gold that can be mined. The first source comes from loose sediment in placer mines, and the second can be found in the ground, unearthed. Various gold mining methods are used to extract gold from these sources but most experts will agree that a long journey begins with a single step. This is to say that before you determine

the gold mining methods that you are about to employ, it is vital to discover and confirm the presence of gold in a particular area. For this task, gold panning is performed in a traditional manner. For those more technologically inclined, they may want to use a gold metal detector which is one of the more cost effective gold mining methods to accurately detect the presence of gold underground. Gold is commonly found in stream beds, so it is understandable that reliable gold mining techniques should be used to extract the precious metal. Sluicing is an effective method for this purpose, whereby a sluice box is placed in the stream where gold is present to collect gold at the bottom of the box as water passes through it. Dredging, on the other hand, is a gold mining method - highly popular in Canada - that can be done in a larger scale.

The process of making bread

Bread is eaten in most parts of the world, but not everyone knows how to bake it. I am going to show you the steps involved in baking bread.

First, measure the correct amount of flour and warm water. Next, mix the flour and water together in a mixing bowl. Add yeast, salt and sugar. Next, knead the mixture until it feels almost dry. Leave the mixture for about an hour in a warm place. It will grow in size. After this, knead the mixture again. Make sure the mixture is not sticky when you touch it. Then leave the dough in a baking tin for about an hour to give it time to rise. Finally, the dough is put into a preheated oven for about forty minutes.

It can be seen that making bread is not difficult as long as the correct procedure is followed. You will love the taste and smell of your freshly-baked bread!

Exercise for Practice :

1. Describe the process of the working of a washing machine.
2. Describe the process of booking a ticket online.
3. Describe the process of opening an account in a bank.
4. Describe the process of withdrawing cash from an ATM.
5. Describe the process of using the Internet Banking Service to make a transaction.

3.5 Sequencing Words

Sequencing of sentences requires an ability to form logical sequence of ideas. There should be spontaneous flow of thoughts without any disrupts. Coherence plays a vital role in sequencing the sentences, whereas, sequencing words help us to understand the order of sentences. For example, a story has a beginning, middle, and an end and sequencing words help us to understand the flow and order of events.

In sequencing of sentences, coordinating conjunctions such as 'and', 'but', 'for', 'not', 'or', 'so', 'yet', are used. Sequencing words such as 'first', 'next', 'then', 'initially', 'before', 'later', 'however', 'finally', are also being used. In addition to these words, the following words are also used for sequencing: firstly, secondly, thirdly, after, afterwards, as soon as, at first, at last, before, long, in the meantime, later, while, meanwhile, next, soon, then, besides, furthermore, in addition, to sum up,

At times connecting words are used to link the cause and effect expressions. Examples of connecting words are : because, so, consequently, therefore, due to the fact, since, as a result, the reason for, thus, nevertheless. These words can be used to combine the sentences which say about the cause in one sentence and the effect in the other sentences.

Exercise for Practice :

Rearrange the jumbled sentences using sequencing words :

I.

1. Secondly, we can heat the steel above a certain critical temperature, and then allow it to cool at different rates.
2. We can alter the characteristics of steel in various ways.
3. Annealing has a second advantage.
4. In the process known as annealing, we heat the steel above the critical temperature and permit it to cool very slowly.
5. This causes the metal to become softer than before, and much easier to machine.
6. At this critical temperature, changes begin to take place on the molecular structures of the metal.
7. It helps to relieve any internal stresses which exist in the metal.
8. In the first place, steel which contains very little carbon, will be milder than steel, which contains a higher percentage of carbon.

II.

1. As soon as the doors opened, they rushed out of the lift, and spent a sleepless night in their room.
2. At first, they were a bit nervous about being out alone at night, after hearing stories about people being mugged, but they felt safe in the car, and were feeling quite relaxed as they drove back to their hotel.
3. The lift came, and the couple jumped in, but the large man started running and got in beside them just as the doors closed.
4. The next morning, they decided to fly home, and went down to the reception to check out.
5. A British couple was on holiday in New York.

6. Immediately, he shouted 'Hit the floor, lady!', and the terrified couple threw themselves down on the floor, throwing all their money and credit cards out of their pockets, and shut their eyes.
7. They parked in the basement car park, and were waiting for the lift up to the hotel reception when a large man with a Rottweiler dog appeared out of the shadows and came towards them.
8. The first night they hired a car and went to a show on Broadway, followed by an Italian meal.

III.

1. The dissolved cellulose is formed into threads by a technical process.
2. This fibre is, in fact, a reconstituted natural fibre.
3. After that, they are dried on a heated roller.
4. The cellulose is obtained from shredded wood pulp.
5. Finally, they are wound on to a bobbin.
6. It is made by dissolving cellulose in a solution of sodium hydroxide.
7. The threads are drawn from the setting bath of dilute sulphuric acid. Then, they are wound on reel and washed.
8. Rayon is a man-made fibre.

IV.

1. Human beings can walk, run, swim, and so on, but robots are usually confined to one place.
2. Another advantage human beings have is the way the same person can do jobs as different as making a cup of tea or designing a new machine.
3. It is a known fact that robots have many advantages over human beings.
4. Taking into account all these factors, it should be remembered that robots owe their existence to human beings.
5. However, it is also true that humans can do many things that robots can't do.

6. For example, humans can carry out a task without having to be told exactly how to do it; they don't have to be programmed.
7. Unlike robots people can know whether what they are doing is good or bad, and whether it is boring or interesting.
8. Even if the robots are able to move, they can do so, only in a very limited way.

V.

1. If the latter are reluctant, start with the former
2. Mix the quick ones with the slow ones.
3. Call for reports after few minutes of discussion
4. The quick learners, spread over the class, can guide this discussion
5. Then gradually move to the latter drawing them out of their selves.
6. The discussion can be in pairs or in groups.
7. The discussion provides a meaningful context to use English to communicate orally.
8. Please encourage discussion among your learners especially the weak ones.

3.6 Embedded Sentences

Embedded sentences are sometimes referred as embedded clause. It is a clause in a sentence which includes a subject and a verb. It is mainly used in the middle of the sentence to give more information and enhances the sentences.

For Example :

The girl, **who was only six**, could play the piano.

The auditorium, **which was very crowded**, was more suffocating than ever.

There are three kinds of embedded clauses which are relative clause (which, where, who), a noun clause (that, which), and an adverb clause (when it happened).

My dog Lucy, who loves pizza crumbs, eats them under the table. (relative clause)

The story, which was narrated by the author, captivated the minds of the audience. (noun clause)

I left all my work, when I heard the noises, made by the neighbours. (adverb clause)

Exercise for Practice :

Find out the embedded clause and the main clause from the following sentences :

1. The guy who committed the theft last night has been caught.
2. The teacher said that necessity is the mother of invention.
3. They felt that the molester must be put to death.
4. The newspaper will tell us tomorrow what the world does today.
5. He could not tolerate what she said because it was quite insulting.
6. There are lots of problems, which every one of us, face each and every day.
7. My brother, who is younger than me, is an engineer.
8. The flowers, that had bloomed last week, were fading fast.
9. She sat on the sofa, while the children played on the floor.
10. They looked up in a surprise, when they heard a girl's scream,

Fill in the blanks with suitable embedded clauses :

1. The wind, _____, blew through the grass field.
2. The old woman, _____, walked slowly to open the gate.
3. The sun, _____, shone into my bedroom window.

4. The bus, _____, struggled up the hill.
5. Germany, _____, scored in the last minute.
6. The bright moonlight, _____, illuminated the empty street.
7. The train, _____, pulled into the station.
8. The gift, _____, was packed with golden cover.
9. Ms. Elena, _____, loves to solve difficult mathematical problems.
10. The room, _____, was hotter than before.

11. government – goverment
12. indispensable – indispensible
13. judgment – judgement
14. liaison – liason
15. maintenance – maintainance
16. memento – momento
17. perseverance – perseverance
18. principal – principle
19. pronunciation – pronounciation
20. questionnaire – questionaire
21. restaurant – restarant, restaraunt
22. secretary – secratary, secratery
23. repetition – repitition
24. vicious – visious
25. weird – weird

3.7 Misspelled Words

Words are commonly misspelled because of pronunciation and some confusion in the spelling of mispronounced word. The words misspelled, pronunciation, mispronounced are also written wrongly as misspelled, pronounciation, mispronouced/mispronounced. Sometimes, the words which require double 'cc' are written with single 'c', instead of 'i' it is written with 'e' and so on. Common errors which occur in words are given below for your better understanding.

List of commonly misspelled words :

1. accommodation – accomodation, acommmodation
2. assassination – assasination
3. bureaucracy – beaurocracy
4. independent – indepentent
5. achieve – acheive
6. caribbean – carribean
7. college – collage
8. ecstasy – ecstacy
9. foreign – foriegn
10. fluorescent – flourescent

Exercise for practice

Find out and correct the misspelt words in the following article :

He walked along the corridors of a reputed college. He had a glance at the Notice Board. He found the academic curriculum rather heavy and the tuition fee on the high side, a recurring phenomenon occurring in many a school. He was wondering whether the children could bear the burden or the parents could accommodate in their budget! He walked further. He saw a calendar on the wall, fluttering in the breeze. He passed alongside a class-room; a teacher was straining the students with the intricacies of grammar. He wondered whether the intuitive and innovative skills of the young minds were kindled at all!

Several classes were going on separately, with students listening and the teachers talking eloquently. A students' shop was selling stationery and mementos. A function was going on under the auspices of a Society to discuss 'the privileges and

prerogatives of pedagogues'. The occasion was punctuated with applause now and then, disturbing the peace and tranquillity of the academic atmosphere. A wall-clock with its pendulum still, face tilted and display erroneous, was smiling from high above at the folly of the academicians!

He passed through a laboratory with students and teachers separated; the students at the work-benches were meddling with irreparably damaged instruments and the teachers were merrily gossiping. He wondered whether there was anyone to advise or anyone to take advice! As he walked out of the campus, he heaved a sigh of relief, hoping for a more auspicious occasion to stage a come-back!

3.8 Speed Reading

How to Read Faster

Reading Faster Requires Steady Practice

Follow the example of good readers! Researchers have discovered that good readers do these three things when they read :

1) Good readers move their eyes steadily across the page

Using video cameras, researchers have recorded the eye movements of people as they read. Good readers move their eyes steadily across the page. They do not hesitate and they do not frequently move back to check what they read. They have the confidence to move steadily forward. You can do the same with practice!

2) Good readers look at groups of words, not individual words

Consider the sentence "Today is one of the most important days of the year". Video tapes show that slow readers pause at every word to get the meaning. They will see "Today" ... "is" ... "one" ... "of" ... "the" ... "most" ... "important" ... "days" ... "of" ... "the" ... "year", for a total of eleven pauses. Good readers, on the other hand, will only pause three or four times in the same

sentence, saving a lot of time. For example, they might read "Today is" ... "one of the most" ... "important days" ... "of the year". Train yourself to read word groupings instead of single words. It takes practice, but that practice will save you a lot of time in the future.

3) Good readers turn off their "inner voice"

When many people read, they have an "inner voice" that pronounces each word, as though they are speaking. I do this, too, when I'm not concentrating. For speaking English, this is an advantage, because you can learn to say all of the words and sentences that you read. However, it slows down your reading speed. When you see a groups words such as "I am hungry", just look at the letters and get the meaning instantly, rather than pretending to say the words. This is not easy to do, but if you can turn off this "inner voice", you will be able to read more in less time.

Reading skills

Here are three tips to help you improve your reading :

1. Styles of reading
2. Active reading
3. Words and vocabulary

1. Styles of reading

There are three styles of reading which we use in different situations :

Scanning : For a specific focus

The technique you use when you're looking up a name in the phone book: you move your eye quickly over the page to find particular words or phrases that are relevant to the task you're doing.

It's useful to scan parts of texts to see if they're going to be useful to you :

- the introduction or preface of a book
- the first or last paragraphs of chapters
- the concluding chapter of a book.

Skimming : for getting the gist of something

The technique you use when you're going through a newspaper or magazine : you read quickly to get the main points, and skip over the detail. It's useful to skim :

- to preview a passage before you read it in detail
- to refresh your understanding of a passage after you've read it in detail.

Use skimming when you're trying to decide if a book in the library or bookshop is right for you.

Detailed reading : for extracting information accurately

Where you read every word, and work to learn from the text.

In this careful reading, you may find it helpful to skim first, to get a general idea, but then go back to read the content from the beginning and now read it in detail. Use a dictionary to make sure you understand all the words used.

2. Active reading

When you're reading for your course, you need to make sure you're actively involved with the text. It's a waste of your time to just passively read, the way you'd read a thriller on holiday.

Always make notes to keep up your concentration and understanding.

Here are four tips for active reading.

Underlining and highlighting

Pick out what you think are the most important parts of what you are reading. Do this with your own copy of texts or on photocopies, not with borrowed books.

If you are a visual learner, you'll find it helpful to use different colours to highlight different aspects of what you're reading.

Note key words

Record the main headings as you read. Use one or two keywords for each point. When you don't want to mark the text, keep a folder of notes you make while reading.

Questions

Before you start reading something like an article, a chapter or a whole book, prepare for your reading by noting down questions you want the material to answer. While you're reading, note down questions which the author raises.

Summaries

Pause after you've read a section of text. Then :

- put what you've read into your own words;
- skim through the text and check how accurate your summary is and
- fill in any gaps.

3. Words and vocabulary

To expand your vocabulary :

Choose a large dictionary rather than one which is 'compact' or 'concise'. You want one which is big enough to define words clearly and helpfully (around 1,500 pages is a good size).

Keep your dictionary at hand when you're studying. Look up unfamiliar words and work to understand what they mean.

Improve your vocabulary by reading widely.

If you haven't got your dictionary with you, note down words which you don't understand and look them up later.

Reading Exercise for Practice

Cancer

Cancer is a class of diseases characterized by out-of-control cell growth. There are over 100 different types

of cancer, and each is classified by the type of cell that is initially affected. Cancer harms the body when damaged cells divide uncontrollably to form lumps or masses of tissue called tumors (except in the case of leukemia where cancer prohibits normal blood function by abnormal cell division in the blood stream). Tumors can grow and interfere with the digestive, nervous, and circulatory systems, and they can release hormones that alter body function. Tumors that stay in one spot and demonstrate limited growth are generally considered to be benign.

More dangerous, or malignant, tumors form when a cancerous cell manages to move throughout the body using the blood or lymph systems, destroying healthy tissue in a process called invasion or if that cell manages to divide and grow, making new blood vessels to feed itself in a process called angiogenesis.

When a tumor successfully spreads to other parts of the body and grows, invading and destroying other healthy tissues, it is said to have metastasized. This process itself is called metastasis, and the result is a serious condition that is very difficult to treat.

In 2007, cancer claimed the lives of about 7.6 million people in the world. Physicians and researchers who specialize in the study, diagnosis, treatment, and prevention of cancer are called oncologists

What causes cancer ?

Cancer is ultimately the result of cells that uncontrollably grow and do not die. Normal cells in the body follow an orderly path of growth, division, and death. Programmed cell death is called apoptosis, and when this process breaks down, cancer begins to form. Unlike regular cells, cancer cells do not experience programmatic death and instead continue to grow and

divide. This leads to a mass of abnormal cells that grows out of control.

What are the symptoms of cancer ?

Cancer symptoms are quite varied and depend on where the cancer is located, where it has spread, and how big the tumor is. Some cancers can be felt or seen through the skin - a lump on the breast or testicle can be an indicator of cancer in those locations. Skin cancer (melanoma) is often noted by a change in a wart or mole on the skin. Some oral cancers present white patches inside the mouth or white spots on the tongue.

Other cancers have symptoms that are less physically apparent. Some brain tumors tend to present symptoms early in the disease as they affect important cognitive functions. Pancreas cancers are usually too small to cause symptoms until they cause pain by pushing against nearby nerves or interfere with liver function to cause a yellowing of the skin and eyes called jaundice. Symptoms also can be created as a tumor grows and pushes against organs and blood vessels. For example, colon cancers lead to symptoms such as constipation, diarrhea, and changes in stool size. Bladder or prostate cancers cause changes in bladder function such as more frequent or infrequent urination.

As cancer cells use the body's energy and interfere with normal hormone function, it is possible to present symptoms such as fever, fatigue, excessive sweating, anemia, and unexplained weight loss. However, these symptoms are common in several other maladies as well. For example, coughing and hoarseness can point to lung or throat cancer as well as several other conditions.

When cancer spreads, or metastasizes, additional symptoms can present themselves in the newly affected area. Swollen or enlarged lymph nodes are common and likely to be present early. If cancer spreads to the

brain, patients may experience vertigo, headaches, or seizures. Spreading to the lungs may cause coughing and shortness of breath. In addition, the liver may become enlarged and cause jaundice and bones can become painful, brittle, and break easily. Symptoms of metastasis ultimately depend on the location to which the cancer has spread

How can cancer be prevented ?

Cancers that are closely linked to certain behaviors are the easiest to prevent. For example, choosing not to smoke tobacco or drink alcohol significantly lower the risk of several types of cancer - most notably lung, throat, mouth, and liver cancer. Even if you are a current tobacco user, quitting can still greatly reduce your chances of getting cancer.

Skin cancer can be prevented by staying in the shade, protecting yourself with a hat and shirt when in the sun, and using sunscreen. Diet is also an important part of cancer prevention since what we eat has been linked to the disease. Physicians recommend diets that are low in fat and rich in fresh fruits and vegetables and whole grains.

Certain vaccinations have been associated with the prevention of some cancers. For example, many women receive a vaccination for the human papillomavirus because of the virus's relationship with cervical cancer. Hepatitis B vaccines prevent the hepatitis B virus, which can cause liver cancer.

Some cancer prevention is based on systematic screening in order to detect small irregularities or tumors as early as possible even if there are no clear symptoms present. Breast self-examination, mammograms, testicular self-examination, and Pap smears are common screening methods for various cancers.



Notes

UNIT - IV

4

Letter Writing and Job Applications

Syllabus : **Listening** - Listening to documentaries and making notes. **Speaking** - mechanics of presentations- **Reading** - reading for detailed comprehension- **Writing** - email etiquette- job application - cover letter - Résumé preparation (via email and hard copy)- analytical essays and issue based essays - **Vocabulary Development** - finding suitable synonyms-paraphrasing- **Language Development**- clauses- if conditionals.

Contents

4.1 Job Application Letter	4 - 2
4.2 E-mail Etiquettes	4 - 3
4.3 Reading Comprehension	4 - 5
4.4 Paraphrasing	4 - 8
4.5 Conditional Clause/ If Clause	4 - 9
4.6 Synonyms	4 - 10

Letter writing is an art. It forms an essential ingredient of life. Letter should be written in a simple and direct manner. The writer should be able to convey his or her thought through a simple and easy style.

Letters should be brief and concise, but they should also convey the purpose and the idea of the writer fully. Avoid spelling and grammatical mistakes. Impolite and harsh language should be avoided. The letter should reveal the writer as a person endowed with courteousness. Courtesy is the hallmark of a good letter. Though every letter has its special characteristics, yet they have one thing in common. They are :

1. Address of the writer and the date
2. Salutation
3. The body of the letter
4. Subscription (complementary close)
5. Signature
6. The superscription (Address on the envelope).

4.1 Job Application Letter

LETTER OF APPLICATION

2/03/2017

ANUJ
12, Rajaji Road
Anna Nagar
Chennai - 45.

Human Resource Department
HTC
Chennai

Sir/Madam,

Sub : Application for the post of Software Engineer-reg.

With reference to your advertisement in "The Hindu" dated 1st March 2017, I would like to apply for the post of System Engineer in your esteemed concern and likely to be considered for this post.

I am a postgraduate in Computer Science from Anna University, Chennai with first class. I have 5 years of experience in the field of making projects based on the Programming language like C, C++. I am confident that I can make further progress in these along with your concern.

If selected for the post, I assure you, Sir, that I will discharge my duties with utmost sincerity and honesty. I have enclosed my resume along this letter for your kind perusal and hope I may be given the opportunity for interview.

Thanking you,

Yours faithfully

Sd/-

(XYZ)

ANUJ

12, Rajaji Road

Anna nagar, Chennai-45

Phone: 044-24683332

Mobile: 9841993332

e-mail: xyz@yahoo.co.in.

Career objective

To effectively utilize my skills and qualification to contribute significantly to an organization that provides a stimulating and competitive environment, as well as long term growth.

Academic profile

Degree/ Course	Name of the institution	Year of passing
M.E. (CSE)	Srinivasa Institute of Engineering and Technology, Chennai	2012
B.E. (CSE)	Srinivasa Institute of Engineering and Technology, Chennai	2010
HSC	Daniel Thomas Matriculation Higher Secondary School, Chennai	2006
SSLC	Venkatesan Matriculation Higher Secondary School, Chennai	2004



Technical skills

Languages	C, C++, Java
Operating systems	Windows 9x/2000/XP
Packages	MS Office
Database	SQL, Oracle

Project details

TITLE : Building an e-health support system based on service oriented architecture.

TECHNOLOGY : JSP, Servlets, Web Services.

DESCRIPTION : This project describes an e-health support system that uses SOA as a means of designing, implementing and managing healthcare services. It provides support for patients, physicians, nurses and pharmacists. It uses SOA to enforce basic software architecture principles and provide interoperability between different computing platforms and applications that communicate with each other.

Academic records and extra-curricular achievements

- Won prizes in school competitions.
- Participated in symposiums conducted by other colleges.
- Organized various symposiums and cultural activities in college.

Area of interest

- Object oriented programming.
- Database management systems.

Experience

- Worked as a junior engineer, in Larzen Computers Pvt. Ltd, from June 12 to December 2015.
- Working as a System Software Engineer in Rheema Computers Pvt. Ltd, from Feb 2015 to till date.

Reference

Mr. Suresh,
Placement Officer
Srinivasa Institute of Engineering and Technology,
Chennai

Personal profile

Name : ANUJ
DOB : 10th, June 1991
Gender : Male
Father's name : Magesh M
Nationality : Indian
Languages known : English (R/W/S), Tamil (R/W/S)

Declaration

I hereby declare that the details furnished above are true to best of my knowledge and belief.

Yours faithfully,

(ANUJ)

4.2 E-mail Etiquettes

Electronic mail, often abbreviated as email or e-mail, is a method of exchanging digital messages, designed primarily for human use. Email as a medium of communication has become an almost indispensable tool for business, educational, social and personal purposes. Email also has the advantage of being quick and easy.

It's also important to note that intentional sarcasm in an email message only makes matters worst. The source of the problem with email communication deals directly with emotion. Emotion portrayed in a text based email can be interpreted differently when being read by different people, in much of the same way that a well written poem or set of song lyrics can receive various interpretations by various people.

There are some email etiquette that are to be followed while drafting an email :

- Be concise
- Be clear in your subject and be brief in the main content.
- Avoid long sentences as well as single line sentences.

- Use appropriate language.
- Use proper grammar and spelling.
- Proofread your message several times.
- Be professional when it is business or official communication.
- Don't use abbreviations and smiley faces in official communication.
- Don't forward chain letter email.
- Beware of reply to all.
- Do not attach large attachments in your email.
- If you have to email more than two documents as attachments, zip them in one file.
- Always reply to emails especially the ones specifically addressed to you.
- Acronyms, abbreviations and smiley faces are OK within reason. As long as you don't overdo it, and the recipients can reasonably be expected to know what they mean.

Sample email correspondence :

From : The Chairman <Chairman@cts.com >

To : Team leaders <Tmleaders@cts.com>

CC : All HR'S <hrsall@cts.com>

Subject : New project work for the month April

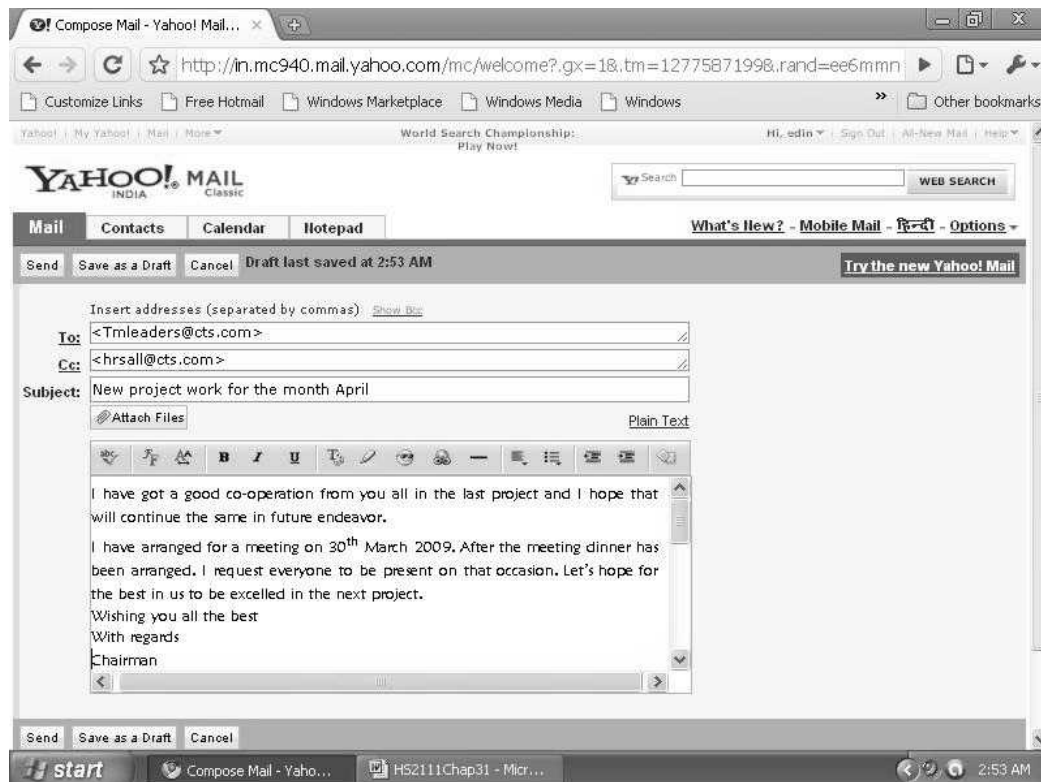
I am pleased to inform that our company has got a new project for April month. I have got a good co-operation from you all in the last project and I hope that will continue the same in future endeavor.

I have arranged for a meeting on 30th March 2009. After the meeting dinner has been arranged. I request everyone to be present on that occasion. Let's hope for the best in us to be excelled in the next project.

Wishing you all the best

With regards

Chairman



Exercise for practice

1. Write an email to your friend enquiring about his future plans.
2. Imagine yourself as the manager of a well known company. Some workers in the factory are careless and are not working properly. Write an email advising to the workers of the company.
3. Imagine yourself as the HR Manager and write an email to welcome the New Staff Member to your team.
4. Write an email to encourage an employee after a disappointment or a company setback.
5. Write an email to announce a job-related party or retreat.
6. Write an email to congratulate someone on an achievement, an accomplishment or on a job well done.

4.3 Reading Comprehension**Reading detailed passages****Global Positioning System**

The Global Positioning System (GPS) is a U.S. space-based radio navigation system that provides reliable positioning, navigation and timing services to civilian users on a continuous worldwide basis - freely available to all. For anyone with a GPS receiver, the system will provide location and time. GPS provides accurate location and time information for an unlimited number of people in all weather, day and night, anywhere in the world.

The GPS is made up of three parts : Satellites orbiting the earth; control and monitoring stations on earth; and the GPS receivers owned by users. GPS satellites broadcast signals from space that are picked up and identified by GPS receivers. Each GPS receiver then provides three-dimensional location (latitude, longitude and altitude) plus the time.

Individuals may purchase GPS handsets that are readily available through commercial retailers. Equipped with these GPS receivers, users can accurately locate where they are and easily navigate to where they want to go, whether walking, driving, flying or boating. GPS has become a mainstay of transportation systems worldwide, providing navigation for aviation, ground and maritime operations. Disaster relief and emergency services depend upon GPS for location and timing capabilities in their life-saving missions. Everyday activities such as banking, mobile phone operations and even the control of power grids, are facilitated by the accurate timing provided by GPS. Farmers, surveyors, geologists and countless others perform their work more efficiently, safely, economically and accurately using the free and open GPS signals. For additional information about GPS, please explore the rest of this website, as well as the external sites referenced on this page.

What is GPS ?

The Global Positioning System (GPS) is a U.S.-owned utility that provides users with Positioning, Navigation, and Timing (PNT) services. This system consists of three segments : The space segment, the control segment, and the user segment. The U.S. air force develops maintains, and operates the space and control segments.

- The space segment consists of a nominal constellation of 24 operating satellites that transmit one-way signals that give the current GPS satellite position and time.
- The control segment consists of worldwide monitor and control stations that maintain the satellites in their proper orbits through occasional command maneuvers, and adjust the satellite clocks. It tracks the GPS satellites uploads updated navigational data and maintains health and status of the satellite constellation.



- The user segment consists of the GPS receiver equipment, which receives the signals from the GPS satellites and uses the transmitted information to calculate the user's three-dimensional position and time.

GPS Services

GPS satellites provide service to civilian and military users. The civilian service is freely available to all users on a continuous, worldwide basis. The military service is available to U.S. and allied armed forces as well as approved government agencies.

A variety of GPS augmentation systems and techniques are available to enhance system performance to meet specific user requirements. These improve signal availability, accuracy and integrity, allowing even better performance than is possible using the basic GPS civilian service. The outstanding performance of GPS over many years has earned the confidence of millions of civil users worldwide. It has proven its dependability in the past and promises to be of benefit to users, throughout the world, far into the future.

The future of GPS

Stand-Alone GPS notional horizontal performance with new signals the united states is committed to an extensive modernization program, including the implementation of a second and a third civil signal on GPS satellites. The second civil signal will improve the accuracy of the civilian service and supports some safety-of-life applications. The third signal will further enhance civilian capability and is primarily designed for safety-of-life applications, such as aviation. The figure on the right depicts the improvement of the quality of service with the additional civilian signals.

Uses of GPS

Roads and highways

It is estimated that delays from congestion on highways, streets and transit systems throughout the

world result in productivity losses in the hundreds of billions of dollars annually. Other negative effects of congestion include property damage, personal injuries, increased air pollution and inefficient fuel consumption.

The availability and accuracy of the Global Positioning System (GPS) offers increased efficiencies and safety for vehicles using highways, streets and mass transit systems. Many of the problems associated with the routing and dispatch of commercial vehicles is significantly reduced or eliminated with the help of GPS. This is also true for the management of mass transit systems, road maintenance crews and emergency vehicles, GPS enables automatic vehicle location and in-vehicle navigation systems that are widely used throughout the world today. By combining GPS position technology with systems that can display geographic information or with systems that can automatically transmit data to display screens or computers, a new dimension in surface transportation is realized.

A Geographic Information System (GIS) stores, analyzes and displays geographically referenced information provided in large part by GPS. Today GIS is used to monitor vehicle location, making possible effective strategies that can keep transit vehicles on schedule and inform passengers of precise arrival times. Mass transit systems use this capability to track rail, bus and other services to improve on-time performance. Many new capabilities are made possible with the help of GPS. Instant car pools are feasible since people desiring a ride can be instantly matched with a vehicle in a nearby area.

Using GPS technology to help track and forecast the movement of freight has made a logistical revolution, including an application known as time-definite delivery. In time-definite delivery, trucking companies use GPS for tracking to guarantee delivery and pick up



at the time promised, whether over short distances or across time zones. When an order comes in, a dispatcher punches a computer function and a list of trucks appears on the screen, displaying a full array of detailed information on the status of each of them. If a truck is running late or strays off route, an alert is sent to the dispatcher.

GPS is an essential element in the future of Intelligent Transportation Systems (ITS). ITS encompasses a broad range of communications-based information and electronics technologies. Research is being conducted in the area of advanced driver assistance systems, which include road departure and lane change collision avoidance systems. These systems need to estimate the position of a vehicle relative to lane and road edge with an accuracy of 10 centimeters. With the continuous modernization of GPS, one can expect even more effective systems for crash prevention, distress alerts and position notification, electronic mapping and in-vehicle navigation with audible instructions.

Marine

The Global Positioning System (GPS) has changed the way the world operates. This is especially true for marine operations, including search and rescue. GPS provides the fastest and most accurate method for mariners to navigate, measure speed and determine location. This enables increased levels of safety and efficiency for mariners worldwide.

It is important in marine navigation for the ship's officer to know the vessel's position while in open sea and also in congested harbors and waterways. While at sea, accurate position, speed and heading are needed to ensure the vessel reaches its destination in the safest, most economical and timely fashion that conditions will permit. The need for accurate position information becomes even more critical as the vessel departs from or arrives in port. Vessel traffic and other waterway

hazards make maneuvering more difficult and the risk of accidents becomes greater.

Mariners and oceanographers are increasingly using GPS data for underwater surveying, buoy placement and navigational hazard location and mapping. Commercial fishing fleets use GPS to navigate to optimum fishing locations, track fish migrations and ensure compliance with regulations.

An enhancement to the basic GPS signal known as Differential GPS (DGPS) provides much higher precision and increased safety in its coverage areas for maritime operations. Many nations use DGPS for operations such as buoy positioning, sweeping and dredging. This enhancement improves harbor navigation.

Governments and industrial organizations around the world are working together to develop performance standards for electronic chart display and information systems, which use GPS and/or DGPS for positioning information. These systems are revolutionizing marine navigation and are leading to the replacement of paper nautical charts. With DGPS, position and radar information can be integrated and displayed on an electronic chart, forming the basis of the integrated bridge system which is being installed on commercial vessels of all types.

GPS is playing an increasingly important role in the management of maritime port facilities. GPS technology, coupled with Geographic Information System (GIS) software, is key to the efficient management and operation of automated container placement in the world's largest port facilities. GPS facilitates the automation of the pick-up, transfer and placement process of containers by tracking them from port entry to exit. With millions of container shipments being placed in port terminals annually, GPS has greatly reduced the number of lost or misdirected containers and lowered associated operation costs.

GPS information is embedded within a system known as the Automatic Identification System (AIS) transmission. The AIS, which is endorsed by the international maritime organization, is used for vessel traffic control around busy seaways. This service is not only vital for navigation, but is increasingly used to bolster the security of ports and waterways by providing governments with greater situational awareness of commercial vessels and their cargo.

AIS uses a transponder system that operates in the VHF maritime band and is capable of communicating ship to ship as well as ship to shore, transmitting information relating to ship identification, geographic location, vessel type and cargo information - all on a real-time, wholly automated basis. Because the ship's GPS position is embedded in these transmissions, all essential information about vessel movements and contents can be uploaded automatically to electronic charts. The safety and security of vessels using this system is significantly enhanced.

Finally, with the modernization of GPS, mariners can look forward to even better service. In addition to the current GPS civilian service, the United States is committed to implementing two additional civilian signals. Access to the new signals will mean increased accuracy, more availability and better integrity for all users.

Summarizing

Exercise for Practice

1. Summarize the above passage in 100 words.

4.4 Paraphrasing

A repetition of speech or writing that retains the basic meaning while changing the words. A paraphrase often clarifies the original statement by putting it into words that are more easily understood.

Original passage :

"10 Crazy Reasons People Got Rejected From College"

"College admissions officers all advise against writing a college admission essay about something that an applicant learned while stoned or drunk. "But we still get a few of those essays," a college admissions officer tells me. "We even got the classic one about how the student, while stoned, realized that the solar system is an atom and the earth is an electron. You'll remember, that conversation occurred in the movie Animal House."

Paraphrased :

College admissions officers generally tell students not to write their admissions essays about a lesson they learned when being stoned or drunk; however, some students still ignore the advice. For instance, one student wrote about the conversation in animal house, as if it were his own stoned experience, about the solar system as an atom and the earth as an election ("10 Crazy Reasons People Got Rejected From College").

Exercise for practice

1. Paraphrase the following passage using appropriate words.

Just as Peanuts seems to have absorbed so much of the popular culture which preceded it, the comic strip has had a profound influence on the society and culture of its own time. Peanuts affects and inspires our daily lives and not simply because we can open our daily newspapers and find it there without fail (for over 14,000 days now without interruption-one of the few certainties in a world beset by unsettling changes). Peanuts has become an integral part of the history of American culture through its influence in so many areas of our life and society.

2. Paraphrase the following passage using appropriate words.

"Exercise"



It is well known that exercise helps to alleviate stress. The National Heart, Lung and Blood Association (NHLBA) endorse exercise as a way to reduce stress and recommends cardiovascular exercise that elevates the heart rate for 15 to 30 minutes-three to four times a week. The American Psychology Association has conducted numerous studies indicating the beneficial effects of exercise in dealing with stress. Exercise releases endorphins into the blood stream. Endorphins are "feel good" hormones and are the body's natural pain-killers. They also generate the sensory perception of physical well-being, which in turn contributes to emotional and mental health.

Language Development

4.5 Conditional Clause/ If Clause

Conditional sentences are made of conditional clauses or if clauses. There is a grammatical relationship in which one situation is dependent on another situation. For example : If you practice well, you will win the match. Broadly speaking we have three types of conditional sentences.

1. Open condition.
2. Hypothetical condition/Unreal.
3. Unfulfilled/Impossible condition.

Conditional clause type 1 : Open condition

Open condition are neutral and/or which are likely to happen.

Structure

If / Unless + Simple Present, will-Future

Example : If I get time, I will go to my native place.

The main clause can also be at the beginning of the sentence. In this case, don't use a comma.

Example : I will go to my native place if I get time.

Conditional sentences type I refer to the future. An action in the future will only happen if a certain condition is fulfilled by that time. We don't know for sure whether the condition actually will be fulfilled and/or not, but the condition seems rather realistic - so we think it is likely to happen.

Conditional clause type 2 : Hypothetical/Unreal condition

Hypothetical conditions are used to speculate about something that is possible or contrary to fact. It is not likely to be fulfilled.

Structure

If / Unless + Simple Past/Past continuous, main clause with Conditional I [= would/should/could + present tense (past future)]

Example : If he won the match, she would be happy.

If she were really concentrating, she would not be disturbed.

Conditional sentences type II refers to situations in the present. An action could happen if the present situation is different. I don't really expect the situation to change, however. I just imagine what would happen if ...

Conditional clause type 3 : Unfulfilled/Impossible condition

Structure

If / Unless + Past Perfect, main clause with would/could/should + have + past participle

Example : If he had worked hard, he would have passed the examination.

Conditional sentences type III refers to situations in the past. An action could have happened in the past if a certain condition had been fulfilled. Things were different then, however. We just imagine, what would have happened if the situation had been fulfilled.

Exercise for practice

Complete the following sentences with appropriate clauses :

1. If you go to France, _____
2. If it rains, _____
3. If I had enough money, _____
4. If I have time, _____
5. If I were a bird, _____
6. If you have any problem, _____
7. If she does not obey the orders, _____
8. If they had been here, _____
9. If drivers obey the traffic rules, _____
10. If we avoid plastics, _____
11. If I learn more english words, _____
12. If they play well, _____
13. If he had a good job, _____
14. If he gets up early, _____
15. If they listened carefully, _____
16. If the atmospheric pollution become worse, _____
17. If you had approached him, _____
18. If there had been no rains last month, _____
19. If there were no politicians to tempt people, _____
20. If the engine is serviced regularly, _____

Complete the following sentences with appropriate clauses :

1. _____, he will not allow you.
2. _____, I would have blamed her.
3. _____, if they had a wonderful time.
4. _____, it would be delicious.
5. _____, otherwise you can't win him.
6. _____, she would have got confused.
7. _____, there will be accidents.
8. _____, she would have passed.

9. _____, you will attend the meeting.
10. _____, it would be solved.
11. _____, he will work hard.
12. _____, we will go for tour.
13. _____, they would have solved the problem.
14. _____, she will have plenty of time.
15. _____, he will open the door.
16. _____, the soup will taste much better.
17. _____, I will take him to the college.
18. _____, he will be really angry.
19. _____, she would have bought new dress.
20. _____, they would have prospered.

Vocabulary Development
4.6 Synonyms
1. Admonish - reprimand, give warning

She admonished the child for her bad behavior.

2. Ameliorate - make better

There is an urgent need to ameliorate drugs for children with cancer.

3. Arduous - laborious

It was an arduous climb up the cliff from the other side.

4. Bureaucracy - non-elective government

The bureaucracy of a company setting will put a stop on creative ideas.

5. Cessation - ending, stopping

There are ample of reasons for cessation of trainees with an industry.

6. Deleterious - injurious, harmful

The government has to take steps to control usage of deleterious substance in food.

7. Dexterity - adroitness, handiness

He is known for his dexterity in social welfare and health care reforms.

8. Discern - distinguish, recognize

Racheal could hardly discern her way out of the village.

9. Disseminate - circulate, disperse

The final challenge for teachers is to disseminate knowledge to students.

10. Embellish - decorate, adorn

The description of her travels was embellished with details of aborigines.

11. Extricate - disentangle, get out

The couple cancelled their plans to extricate themselves from financial crisis.

12. Feign - pretend, make believe

Sheela feigned sleep to avoid having to answer her parents.

13. Fetid - rotten, foul

She could not tolerate the fetid smell from the next door.

14. Gregarious - outgoing, clustered

He is a gregarious person who dislike to be alone.

15. Impede - hinder, obstruct

It is obvious that he ventured to impede the investigation.

16. Inculcate - instill, infuse

Teachers have to inculcate the habit of reading among their students.

17. Languid - unenergetic, feeble

Benison was always criticized for his languid style of play.

18. Novice - beginner

They arranged a special training for the novice engineers and technicians.

19. Perfunctory - casual, uninterested

She answered the authorities with a perfunctory manner.

20. Quintessence - exemplar, embodiment

Shaw was a fervent advocate of the quintessence of Ibsenism.

21. Repudiate - renounce, refuse

Smith showed no desire to repudiate the aesthetic sense of life.

22. Subterfuge - deception, dodge

The economic measures are used as a subterfuge for racial discrimination.

23. Trepidation - anxiety

The release of a new mobile phone has created trepidation among youngsters.

24. Ubiquitous - omnipresent, ever-present

The author vividly describes the ubiquitous nature of injustice prevalent in the society.

25. Vicarious - substitutional

He might have a vicarious experience of humiliation in the selection process.

Match the following :

Sr. No.	Column A	Column B
1.	Adagio	Binding
2.	Congenital	Retinue
3.	Debilitate	Pleasant
4.	Entourage	Indication
5.	Fiasco	Insatiable
6.	Incumbent	Composition
7.	Palatable	Watchful
8.	Quirk	Disaster
9.	Vestige	Inborn
10.	Vigilant	Oddity
11.	Voracious	Incapacitate

Write the meaning and make your own sentence using the following words :

1. Acculturation

Meaning : _____

Sentence : _____

2. Debacle

Meaning : _____

Sentence : _____

3. Emanate

Meaning : _____

Sentence : _____

4. Garrulous

Meaning : _____

Sentence : _____

5. Inexorable

Meaning : _____

Sentence : _____

6. Innuendo

Meaning : _____

Sentence : _____

7. Repression

Meaning : _____

Sentence : _____

8. Impasse

Meaning : _____

Sentence : _____

9. Inertia

Meaning : _____

Sentence : _____

10. Indiscreet

Meaning : _____

Sentence : _____

11. Inundate

Meaning : _____

Sentence : _____

12. Subsidy

Meaning : _____

Sentence : _____

13. Vertigo

Meaning : _____

Sentence : _____

14. Virtuoso

Meaning : _____

Sentence : _____



5

Report Writing and Group Discussion

Syllabus : **Listening-** TED/Ink talks; **Speaking** -participating in a group discussion **-Reading-** reading and understanding technical articles **Writing-** Writing reports- minutes of a meeting- accident and survey- **Vocabulary Development-** verbal analogies. **Language Development-** reported speech.

Contents

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Report Writing

5.1 Report Writing

Reports are accurate and objective descriptions or accounts of significant events which could be political, social, and academic. A report is a form of written communication produced after an investigation or a survey on a specific topic. It is written for a specific purpose. Even though the report contains the writer's opinions and recommendation, it is essentially based on facts and findings collected during the survey.

Language of the report : The first person pronouns (I, my, me) should not be used in the reports. Passive voice is preferred in describing the procedure and making recommendations.

A Report has the following organization/format :

Title :

- Title of report
- Author and author's title
- Person/organization who requested the report
- Date of report submission

I. Introduction :

- Purpose or aim of the report
- Who authorized the action report ?
- Any other background information

II. The body of the report :

- Detailed description of the incident, methods and plans is provided.
- A detailed account of the facts and findings is furnished.

III. Recommendations :

- Recommendations must be listed.
- Impersonal passive voice is generally used.

- Imperative sentences should be avoided.

IV. Conclusion :

Reporter's concluding remarks or evaluatory statements are to be presented in this part of the report.

Checklist for guidance;

- Have I mentioned all the information relevant ?
- Has all the necessary information been included ?
- Is the information organized so that it clearly and effectively conveys the message ?
- Are the recommendations supported by the facts ?
- Is the report free of spelling mistakes ?
- Have I used research to support the analysis done ?

5.2 Fire Accident Report

A Report on the Fire Accident in the Factory

SUBMITTED TO

MR. K. SURESH KUMAR

Chairman

General Motor Company Ltd, Chennai

SUBMITTED BY

MR. J. LENIN

Safety Engineer

General Motor Company Ltd, Chennai

SUBMITTED ON

December 4, 2008

A Report on the fire accident in the factory

04.12.2017

MR. J. LENIN

Safety Engineer

The Chairman

General Motor Company Ltd.

Sir,

Sub : Report on the fire accident in the factory – reg.**Ref :** Your Memo dated 01.12.17.

With reference to your accident that took place on 01.12.17 in our factory, the following report is submitted after investigation. Suggestive measures are provided to avoid such mishaps in future.

On 1st of December, a fire broke out around 11.00 a.m. in the generator room due to power fluctuation and burning of cables. It spread so quickly that it consumed fairly a large number of tools and spare parts in the next room. Moreover, the electrician, Mr. Senthil sustained burn injuries. Unfortunately, he was the only person who was working at that time, as the other workers had gone for tea.

Under investigation, it was found out that some spark had occurred due to fluctuation and short circuit in the main line. As Mr. Senthil had been working at that time, the fire was put off after great struggle. This fire accident has resulted in a loss of about two lakh rupees.

To avoid such mishaps in the future, it is recommended that

- i) The cables should be checked at regular intervals.
- ii) The worn out wiring should be replaced with new ones.
- iii) Proper fuses should be installed.
- iv) Automatic fire extinguishing sprays can be installed.
- v) Fire alarms can be installed.

If all these measures are implemented, surely such accidents can be prevented in future and thereby loss to human resources and property can be prevented.

Yours faithfully,

(Sd./-)

(MR. J. LENIN)

Safety Engineer

Exercise for Practice :

1. Imagine yourself as a Safety Engineer. Write a detailed report on any accident which happened at the workplace due to carelessness.

5.3 Report on Industrial Visit

A sample report on industrial visit by a third year student.

A REPORT ON INDUSTRIAL VISIT

As a part of our curriculum, it is mandatory to attend INDUSTRIAL VISIT. In my 6th semester, I visited DOORDHARSHAN KENDRA, CHENNAI. I went along with my class. Mr. EASHWAR and Ms. INNISAI were the staff, who accompanied us.

First, it was an introduction session covering the history of the Doordharshan and their achievements. Then they divided us into four groups for four sessions and each group attending the sessions alternatively. The four sessions were

1. VIDEO COVERAGE
2. TRANSMITTER STATION
3. EARTH STATION
4. STUDIO

My first session was on VIDEO COVERAGE. They explained about the overall functionality of the camera and how it is used. They showed us how to take a moving picture. I saw different varieties of camera.

They gave us an opportunity to use their cameras and to take our own videos.

My second session was TRANSMITTER STATION. It was a big room, where a large number of transmitters and receivers were present. They explained everything and showed us the ranges of the frequencies, bandwidth, exchange of signals, power consumption, etc.

We went for lunch break and in our post lunch we covered the remaining sessions.

My third session was EARTH STATION. First, they taught us the different types of signals and how to calculate their frequency range, Azimuth angle, etc. Then they took us near the Dish Antennas and explained completely about it.

My final session was STUDIO. There were four studios – STUDIO-I, STUDIO-II, STUDIO-III and STUDIO-IV. I learned valuable information that STUDIO-I is the largest one in ASIA. STUDIO-I is for culture events, which includes dance, music, etc. STUDIO-II is for LIVE programmes. STUDIO-III is for cooking programmes and STUDIO-IV is for NEWS TELECAST. I saw LIVE programmes and NEWS and they explained about the operation of TELEPROMPT.

Therefore, the visit came to an end. From these sessions I learnt that how programmes are shot, how the news are read, how the channels are broadcasted and directed to our home. I gained knowledge about the working of TV station. It was really an interesting and extremely useful visit.

I thank my benevolent staff for arranging this visit and I also thank DOORDHARSHAN KENDRA for giving a golden opportunity to get knowledge about their work.

Exercise for Practice :

1. Imagine you have visited Neyveli Lignite Corporation for Industrial visit. Write a detailed report about your visit, experience, and key learning of the visit.

5.4 Survey Report**AGNI COLLEGE OF TECHNOLOGY
THALAURMBUR CHENNAI****Survey Report on
Recommending new smart room**

Submitted to
Dr. SubashChandar
Director

Submitted by
Er. V. Ramesh
Senior Engineer, Planning and Development Wing

Aim :

The aim of the report is to recommend constructing suitable smart rooms in the college campus

Reference :

The Managing Director has ordered to Survey and find out construction of suitable smart rooms in Agni College of Technology in the letter No.108 dated 20.03.2017.

Procedure :

A six member committee headed by Chief Engineer Mr. V. Ramesh (from Planning and Development Wing) was sent to different class rooms to convert them into

smart rooms. The team visited various classes, and narrowed down four classes for the purpose. An extensive survey was conducted on the availability of technical equipment and electricity sources. The extensive analysis was useful and encouraging.

Findings :

After collecting all the feedbacks, a complete analysis was done. The following are the findings.

- i) All the four classes have many facilities in and around to be converted into smart rooms.
- ii) Most of them are well connected with electricity and smart boards and well-spaced room.
- iii) Students and teaching faculty are happy to know that a few class rooms are being converted into smart rooms.

Recommendations :

1. It is recommended that in future many class rooms need to be converted into smart rooms.
2. It is advisable to have enough technical and electronic equipment's needed to make the smart rooms effective.
3. Students should be given more opportunities to make smart rooms useful to them.

Conclusion :

After making extensive survey the committee has recommended strongly for the conversion of class rooms into smart rooms. It is highly recommendable to have smart rooms in Agni College of Technology. The college can start building the new smart rooms within two months, so that it can begin their regular classes in full swing by next year.

Place : Thalambur

Chennai

Sd/-

Date : 21.04.2017

Senior Engineer

FEASIBILITY REPORT ON INSTALLING A WASTE WATER RECYCLING PLANT NAME OF THE FIRM

SUBMITTED TO
NAME
DESIGNATION
NAME AND ADDRESS OF THE FIRM

SUBMITTED BY
NAME
DESIGNATION AND ADDRESS

Table of Contents

- Abstract
- Introduction
- Procedure
- Discussion
- Conclusion
- Recommendation

Introduction

In general, the sanitation field seems to live the life of an orphan in many countries. In many cases this important sector of public health has been left alone when major upgrading projects improved the water supply systems in many countries and provinces. This basically ignored the downstream effect of improved water supply that of increased discharges into rivers or aquifers. Two reasons appear to be the major cause for that, firstly, wastewater collection and treatment is costly and their benefit often hard to show : and secondly, even if low-cost solutions are being implemented many project fail to deliver the expected outcome. Without pretending to reflect the complexity

of sanitation projects three principal reasons may be held accountable for the non-delivery problems :

- The technology was not appropriate.
- The beneficiary was not involved and consulted sufficiently
- The responsibilities within government were not resolved to ensure the necessary support.

Abstract

During the last years many rural areas were provided with some kind of water supply system. The availability of water leads to wider spread use of flush toilet system. These systems mainly use simple toilets to discard the waste water either directly into toilets the porous underground or into simple holes. At the same time many villages still supplement their water supply from shallow wells are often located in the direct neighbourhood of the toilets.

Even if landowners consider the possible contamination of their well through their own toilet and locate them far apart they cannot avoid the location of their neighbour's toilet close to their well. A similar risk of water body contamination occurs where villages situated on the banks of a small estuary/lagoon discharge their wastewater without treatment. It is expected that Small Scale Wastewater Treatment Plants (SSWTP), under certain circumstances, are the solution for these problems.

Purpose of the project :

The main purpose of the project is to identify :

- Current wastewater disposal and treatment techniques
- Ongoing sanitation initiatives and projects, stakeholders in the sanitation sector

- The administration structures related to sanitation projects, a possible project implementation agency, and sites for future pilot projects.

Procedure :

Levels of Wastewater Treatment

Wastewater treatment options may be classified into groups of processes according to the function they perform and their complexity : Preliminary Treatment – includes simple processes that deal with debris and solid material. The purpose of preliminary treatment is to remove those easily separable components. This is usually performed by screening (usually by bar screens) and grit removal. Their removal is important in order to increase the effectiveness of the later treatment processes and prevent damages to the pipes, pumps and fittings.

Primary Treatment : It is mainly the removal of solids by settlement. Simple settlement of the solid material in sewage can reduce the polluting load by significant amounts. It can reduce BOD by upto 40 %. Some examples of primary treatment is septic tanks, septic tanks with upflow filters, inhofe tanks.

Secondary Treatment : In secondary treatment the organic material that remains in the wastewater is reduced biologically. Secondary treatment actually involves harnessing and accelerating the natural process of waste disposal whereby bacteria convert organic matter to stable forms. Both aerobic and anaerobic processes are employed in secondary treatment. Some examples of secondary treatment are USAB, reed bed systems, trickling filters and stabilisation ponds.

Tertiary Treatment : It is the polishing process whereby treated effluent is further purified to acceptable levels for discharge. It is usually for the removal of specific

pollutants e.g. nitrogen or phosphorus or specific industrial pollutants. Tertiary treatment processes are generally specialised processes. Some examples of tertiary treatment are bank's clarifiers, grass plots, etc.

The majority of secondary treatment processes are biological in their nature-i.e. they use the natural activity of the bacteria to break down polluting material. Biological treatment processes can themselves be divided into two general sub-divisions-aerobic and anaerobic processes.

Advanced or quartairy treatment : It is applicable only to industrial wastes to remove specific contaminants.

Conclusion :

- More specifically the SSWTP technology could be applied where conventional sewage is simply too costly.
- Environmental conditions require a high effluent quality.
- Conventional on-site treatment proved to be of low community acceptance.
- Low technology solution, such as composting toilets seems to be inappropriate.

Recommendation :

It is necessary to treat human waste or excreta for many reasons, but the most important reason is to preserve health. Untreated human excrement contains a variety of pathogenic organisms, which include protozoa, bacteria, viruses and eggs of helminthes that are disease - causing organisms. The presence of these in the environment transmits various types of diseases. They could be :

- Water-borne where pathogens are present in water supplies.
- Soil-based where the excreted organism is spread through the soil.

- Insect-vector borne where the pathogen is spread by insects that feed or breed in water. E.g. flies and mosquitoes.
- Faecal oral transmission routs by which pathogens from faeces reach the mouth by either hand, clothes, food, etc.

Exercise for Practice :

1. Write a feasibility/survey report for introducing a new product in the market.
2. As the Marketing Executive of 'Chennai Home Makers' you have been asked by the Managing Director to study the feasibility of introducing a new dish wash bar. Prepare a report by the study.

5.5 Reading

Read the following passage and answer the questions which follow it :

The India Mark II is a deep-well hand pump used in villages all over India. It is also famous in many other parts of the world. People prefer to use this pump rather than pumps made in other countries. It is a very simple pump. It does not look very special but it has changed the lives of millions of people. That is why it is called the 'miracle pump'.

Clean drinking water is the key to human survival. It is a symbol of life. The UN agency, the World Health Organization (WHO) estimates that 80 percent of all diseases in the world are caused by contaminated water. For example, typhoid and cholera are two common water related diseases. The United Nations objective is to provide clean drinking water for every person around the globe by the year 1990. Several ways of doing this were considered. They looked at many options. First they assumed that water could be supplied by a centralized system. But the cost of this would be very high. Also, there might be problems administering a system like this. So the planners

looked for a cheaper and more practical solutions. This was their conclusion the best option would be to use ground water and hand pumps.

The hand pump is an old concept. The earlier pumps were made from cast iron and even wood. However, these suffered from several drawbacks such as low discharge, inefficient operation needing greater manual effort, shorter life span and danger of contamination from surface water. Also the common hand pump is a suction pump. This limits its ability to draw up water from a maximum depth of only nine meters. The India Mark II has taken care of all these disadvantages. It is a positive displacement pump meaning that it can operate up to any depth. It is almost entirely made from steel and being fully galvanized. It is sturdy and long lasting. It has an excellent built-in mechanical efficiency. Any one can operate it easily upto a depth of 30 meters. It is totally sealed from external contamination. Overall it seems to be an effective answer to the requirements of the world community. The design is so simple that it is easily manufactured by small units in India.

Today the India Mark II is praised by water experts all over the world. It can pump water from as deep as 80 - 90 meters. It can also be motorized or run on wind mills. In the tests done in the UK, the India Mark II was the winner in a competition with hand pumps from almost all the industrially advanced nations.

The main problem with the India Mark II has been in the maintenance of pumps located in remote areas. The breakdown of a pump is not usually caused by poor materials or bad design. More often it is caused by its improper use. For example, people tie their buffaloes to the pump.

Others climb on them or they put twigs or stones in the spout. In India, a lot of work has been done to improve the maintenance of the one million pumps in use. But in most African countries maintenance is still a serious difficulty.

However, despite these problems, we can say that perhaps no other single thing has ever done so much good for so many people at such a low cost.

1. Give descriptions of the following in a single sentence
 1. The hand pump
 2. The India Mark II hand pump
2. Identify the causes for the problems given
 1. Contaminated water
 2. Centralized pumping system
3. Write the solutions suggested for the problem stated
 1. Providing clean drinking water
 2. Danger of contamination
4. Make a comparison of the other hand pumps and India Mark II hand pump
5. Complete the sentence
The India Mark II is called as miracle pump since.....

Read the passage carefully and answer the questions that follow it.

One of the consequences of technology and population growth is the increase of population throughout the world. Everyone knows the further of all life on earth will be endangered if man does not control the contamination of the environment. We read about accidents that cause pollution of cities or the poisoning of millions of fish in big rivers, but few of us realize the full extent of the dangers that control mankind.

Pollution can take many forms; derelict landscapes caused by quarrying or mining, destroyed forests, industrial effluent, indestructible garbage, motor car fumes, farming, chemicals, military poison gases, nuclear tests, etc. Pollution can poison the air we breathe, the water we drink and the food we eat. The pronoun 'we' refers not only to men, women and children but also to all our fellow creatures on earth-insects, birds, fish and animals.

It is true, progress in knowledge had led to the development of science and technology, which has, in turn, profoundly altered man's environment. For example, fertilizers and insecticides have increased agricultural output, which is required to feed the swelling population of the world. However both give rise to pollution. Each one in the modern world has accumulated in our body a few milligrams of D.D.T., which is oran chlorine, a type of insecticide. The D.D.T. level in fish is rising and already some fish eating birds are becoming sterile. Fertilizers used in farmlands are washed away by rain into rivers, lakes and reservoirs. The heavy intake content in fertilizers leads to a wild growth of vegetation in them, which in turn de-oxygenizes the waters and as a result, all the fish is lost. Massive industrialization too has led to serious pollution of the environment. Millions of tons of smoke, sulphur gas, ash and unknown quantities of toxic by-products are sent up every day all over the world and we simply do not know if our new chemical environment is slowly poisoning us all. What is even worse, the increase in the carbon-xi-oxide content of the atmosphere from burning oil and coal may, in time prevent the escape of the sun's heat from the earth, leading to a rise in the earth's temperature, the melting of the ice-caps, and a rise in the level of the ocean.

The sea has become a cheap dumping ground for all kinds of waste products. Although the sea has a great capacity to break down all kind of waste, this capacity is not unlimited, especially in shallow seas, industrial effluent gets washed out to sea, for industries tend to concentrate in coastal areas in order to be able to dispose of unwanted wastes as well as poison gases, are dumped in the sea by industrial and military authority. Chemical and biological warfare, like nuclear warfare, could one days destroy mankind. The weapons used destroy not merely the enemy but vase civilian

population as well. It seems we can expect a steady rise in leukemia and bone-cancer in the world.

It will be foolish to shut our eyes to the dangers of pollution that man causes. It is true that more and more people have become aware of the dangers of pollution. Rivers are gradually being restored to health; international organizations are trying to keep the seas clean. Industries are being asked to pay large sums to meet the cost of dispensing of effluents. Campaigns are being organized against cutting down trees. Public opinion is gradually being aroused to concern, and if all of us become concerned about our environment, we shall be able to keep the earth habitable for future generators.

a. Say whether the following statements are true or false

1. According to the author, most of us do not know anything about are pollution of cities.
2. The author is quite pessimistic about the chances of controlling pollution.
3. The author does not ignore the positive contributions of science and technology.
4. Pollution affects only human beings.

b. Answer the following questions in a sentence or two

1. Mention any two factors that cause pollution in the sea.
2. "However both give rise to pollution". What are the two things referred to here?
3. How do we accumulate D.D.T. in our bodies?
4. How, according to the author, does population rise lead to pollution?

c. Complete the sentences drawing your answer from the text.

1. If man does not control pollution _____.
2. Man's environment has been greatly altered by _____.

3. Rivers, lakes and reservoirs get contaminated when _____ .

4. The sea does not have the capacity to _____ .

d. Find words in the passage which mean the following

- That which cannot be destroyed
- Sewage from factory or waste tank
- Fit to be lived in
- Poisonous

5.6 Minutes of the Meeting

Minutes are not a description of what happened at a meeting – they are the official record of decisions that were taken. So keep them brief and accurate.

Minutes should include :

- The purpose of the meeting (i.e. it's title).
- The date and place of the meeting.
- The names of those present and those who sent apologies for absence.
- The discussions done and the decisions taken.
- Any resolutions passed, or decisions taken.

Sample Minutes of the Meeting :

MINUTES OF MEETING FOR COLLEGE ANNUAL FEST

Date : 02.04.2015

Time : 02.00 pm

Venue : Board Room

Attendance

Chairperson : Dr. S. R. R. Senthil Kumar (Principal)

Members Present :

- Mr. Gnanasivam (Convener, Head, Dept. of ECE)
- Mr. K. Sivakumar (Secretary, Assistant Professor, Dept. of ECE)

3. Mr. P. Karthick (Assistant Professor Dept. of EEE)

4. Mrs. M. Leena (Assistant Professor Dept. of CSE)

5. Mr. T. Abishek (III Year Mechatronics)

6. Ms. U. Kavya (II Year Biomedical)

Members Absent :

1. Mrs. A. Lakshmi (Assistant Professor , Dept. of Chemistry)

2. Ms. Y. Jayalakshmi (Assistant Professor, Dept. of Physics)

3. Mr. G. Manoj (IV EEE)

4. Ms. A. Suma Ray (III CSE)

Agenda

- Inviting the chief Guest.
- Making accommodations for the college participants
- Coordinating sports event
- Selection of volunteers
- Allotment of the fund
- Meeting adjourned

Issues Discussed

Minutes of the previous meeting was read out and approved by the members present.

Inviting the Chief Guest :

It was decided to invite Dr. P. Mahadevan (Indian Piston P. Ltd.) as the chief guest for the annual fest.

Making Accommodations for the College Participants

Members decided that food and accommodation should be provided free for all participants from other colleges.

Selection of Volunteers :

Members gave suggestion to select 5 members from each department. The members have been informed in prior. All duties and responsibilities must be allotted to them.

Coordinating Sports Event :

Mr. Karthick, Asst. Prof. of English department was nominated as the sports coordinator. He has to take charge of all the medals and certificates regarding sports.

Allotment of the Fund :

The Convener of the event submitted a budget of three lakh and fifteen thousand rupees for conducting the program. The principal allotted the fund.

Meeting Adjourned :

The meeting came to an end with the note of briefing given by the principal. The next meeting was scheduled for 12.04.2015.

Mr. Gnansivam
(Convener)

Mr. Sivakumar
(Secretary)

Exercise for Practice :

1. Write minutes of meeting imagining that a cultural day celebration meeting was conducted in the college last week. Give details of the date, time, venue, members who attended, topics discussed, and the resolutions adopted in your minutes of the meeting.
2. Suppose you attended a meeting of your college environmental club. Write the minutes of the meeting. Give details of the date, time, venue, members who attended, topics discussed and the resolutions adopted in your minutes.

5.7 Group Discussion

Discussions of any sort are supposed to help us develop a better perspective on issues by bringing out diverse viewpoints. Whenever we exchange differing views on an issue, we get a clearer picture of the problem and are able to understand it. The understanding makes us better equipped to deal with the problem. This is precisely the main purpose of a discussion. The

dictionary meaning of the word group discussion is to talk about a subject in detail. So, group discussion may refer to a communicative situation that allows its participants to express views and opinions and share with other participants. It is a systematic oral exchange of information, views and opinions about a topic, issue, problem or situation among members of a group who share certain common objectives.

GD is essentially an interactive oral process. The group members need to listen to each other and use voice and gesture effectively, use clear language and persuasive style.

GD is structured : The exchange of ideas in a GD takes place in a systematic and structured way. Each of the participants gets an opportunity to express his/her views and comments on the views expressed by other members of the group.

GD involves a lot of group dynamics, that is, it involves both - person to person as well as group to group interactions. Every group member has to develop a goal oriented or group oriented interaction. A participant needs to be aware of needs of other group members and overall objectives of the discussion.

Definition : Group discussion may be defined as - a form of systematic and purposeful oral process characterized by the formal and structured exchange of views on a particular topic, issue, problem or situation for developing information and understanding essential for decision making or problem solving.

A group discussion helps problem solving, decision making and personality assessment. Whether one is a student, a job seeker, a professional engineer or a company executive one needs effective GD skills. Students need to participate in academic discussions, meetings, classroom sessions or selection GDs for admission to professional courses. A job-seeker may be required to face selection GDs as part of the selection process. Professionals have to participate in different

meetings at the workplace. In all these situations, an ability to make a significant contribution to group deliberation and helping the group in the process of decision making is required. The importance of GD has increased in recent times due to its increasing role as an effective tool in a) Problem solving b) Decision making c) Personality assessment. In any situation of problem, the perceptions of different people are discussed, possible solutions are suggested. The best option is chosen by the group. While taking a decision, the matter is discussed, analysed, interpreted and evaluated.

While using GD as a tool for personality assessment, a topic-a problem, an opinion or a case - is given to the group consisting of eight to ten members seated in a circle. The total time given for discussion is usually 30 minutes. Each candidate is expected to voice his opinion and offer counter arguments. The selection committee evaluates the candidates on the basis of their personality, knowledge, communication skills and leadership skills. Hence it is important to be able to take part in the GD effectively and confidently. Participants should know how to persuade their group members, how to reflect leadership qualities and how to make the group achieve its goal.

In any kind of GD, the aim is to judge the participants based on personality, knowledge, communicative ability to present the knowledge and leadership skills. Today team players are considered more important than individual contributors. Hence the potential to be a leader is evaluated and also ability to work in a team is tested. The evaluators generally assess the oral competence of a candidate in terms of team listening, appropriate language, clarity of expression, positive speech attitudes and adjustments, clear articulation, and effective non-verbal communication.

How to Face Group Discussions

A group discussion consists of :

- Communication skills
- Knowledge and ideas regarding a given subject
- Capability to co-ordinate and lead
- Exchange of thoughts
- Addressing the group as a whole
- Thorough preparations

Communication Skills

The first aspect is one's power of expression. In a group discussion, a candidate has to talk effectively so that he is able to convince others. A candidate who is successful in holding the attention of the audience creates a positive impact. It is necessary that you should be precise and clear. Your knowledge on a given subject, your precision and clarity of thought are the things that are evaluated.

Ability to listen is also what evaluators' judge. They look for your ability to react on what other participants say. Hence, it is necessary that you listen carefully to others and then react or proceed to add some more points. Your behavior in the group is also put to test to judge whether you are a loner or can work in a group.

Knowledge and Ideas Regarding a Given Subject

Knowledge of the subject under discussion and clarity of ideas are important. Knowledge comes from consistent reading on various topics ranging from science and technology to politics. In-depth knowledge makes one confident and enthusiastic and this in turn, makes one sound convincing and confident.

Leadership and Coordinating Capabilities

The basic aim of a group discussion is to judge a candidate's leadership qualities. A candidate should display tactfulness, skill, understanding and knowledge on varied topics, enterprise, forcefulness and other

leadership qualities to motivate and influence other candidates who may be almost equally competent.

Exchange of Thoughts

A group discussion is an exchange of thoughts and ideas among members of a group. These discussions are held for selecting personnel in organizations where there is a high level of competition. The number of participants in a group can vary between 8 and 15. Mostly a topic or a situation is given to group members who have to discuss it within 10 to 20 minutes.

Addressing the Group as a Whole

In a group discussion it is not necessary to address anyone by name. Even otherwise you may not know everyone's names. It is better to address the group as a whole.

Thorough Preparation

Start making preparations for interview and group discussions right away, without waiting till the eleventh hour, this is, if and when called for them. Then the time left may not be adequate. It is important to concentrate on subject knowledge and general awareness.

Points to Remember

- Language use should be simple, direct and straight forward. Clarity in speech and expression is yet another essential quality. A GD is a formal occasion where slang should be avoided.
- Do not use more words than necessary. Try to be specific. Do not exaggerate.
- Body language and eye contact too are important points which are to be considered. Do not get over excited and do not forget basic decency.
- Eye contact plays a major role. Non-verbal gestures, such as listening intently or nodding while

appreciating someone's viewpoint speak of you positively.

- Address the person farthest from you. If he can hear you everyone else too can.
- Don't interrupt a speaker when the session is on. Try to score by increasing your size, not by cutting others short.
- Power to convince effectively is another quality that makes you stand out among others.
- Communicate with each and every candidate present. While speaking, don't keep looking at a single member. Address the entire group in such a way that everyone feels you are speaking to him or her.
- Additional marks may be given for starting or concluding the discussion.
- If you are not able to start, you should give a point or two.
- Raise one or two valid points. See that you do not keep repeating a point.
- If you are not sure about the topic of discussion, it is better not to initiate. Lack of knowledge or wrong approach creates a bad impression. Instead, you might adopt the wait and watch attitude. Listen attentively to others, may be you would be able to come up with a point or two later.

Sample GD :

WE WILL NEVER BE CORRUPTION FREE SOCIETY

Number of Participants: 5

Time: 20 Minute

Pooja :

A very good morning everyone! I feel very proud to be sitting here for this exciting discussion. I hope this will lead to a very productive exercise.

When it comes to predict that whether we will have a corruption free society or not, I would say it is not

impossible but also very difficult to achieve as I strongly believe that corruption is the price we pay for democracy. Corruption is the abuse of power and consequently the people. It not only prevents enough money to go in the pockets of the people who need it, but makes it easy for the politicians to grab it all. This problem is not only prevalent in India, but also in developed countries. So, I think corruption is caused by greed, which is inevitable pull of emotion in humans.

Vishal :

Hello Friends, corruption is NOT the price we pay for democracy. Thus, it is possible to have a corruption free society. If you think about it, being a democracy is the only thing that helps us put our views out here. A democratically elected government is answerable to the people, through the opposition party. Yes, there is rampant corruption in the society, not just in the government services, but also in private sector industries, such as Satyam. But think for a moment. A lot of money has been looted with a legal check on power. What if we had no rights to say what we want to? If there was no opposition, who would have pointed out the embarrassing flaws in the ruling party? The corrupt will have a license to do it in the open, and a lot more money would be taken away from each of us. Thus politicians can also help in discarding corruption from our system.

Akshita :

Good Morning friends, what I believe is that it is very easy to say, that corruption is unstoppable, and crack jokes about the corruption in India. But if none of us pay a bribe to anyone, try to use monetary power to cut corners, this is possible. Government agencies might refuse to work without your bribe, but if none of us pay a bribe and he still refuses to work, the whole system will collapse. He will not be able to take it after a point.

This doesn't happen in a day, of course, but with a clear destination set in our minds, we can get there.

This won't be the first time when a mass public agitation will rise in the country, where the government seemed to be in power of everything. What it needs is persistence and non-cooperation of the public. Think of our fight for independence. Corruption was much more rampant, and the Englishmen were in control of all our government undertakings. We got them out of the country. It is possible to do that to corruption as well, we just need persistence and faith.

I also would like to mention that if corruption was the price paid for democracy, communist nations such as China wouldn't be corrupt, and they are ranked higher in the most corrupted nations list.

N Manish :

Hello Friends, I believe it is absolutely possible to have a corruption free society as we are the largest democratic country. We have many rights in our hands but as far as corruption is concerned democracy opposes it. If we know our rights and our responsibilities, we can surely throw away corruption from its roots. We have to change at first place because removing corruption is neither a one day job nor a one man's job. We must stop giving bribe in public offices, to traffic police, we all must abide by rules and regulation then only the cure of corruption is going to come.

Rushil :

Friends, what I believe is that democracy is not the price we pay for corruption but corruption is the consequences of unawareness of people towards this everyday topic of life. Corruption has to be stopped in any way and the main thing is to increase the awareness of common people towards this problem of bribes. The main power that could help in controlling this is the media. It could be the newspaper, TV or radio

they have to start campaigns against this life taking disease. They can contribute a lot in creating a corruption free society.

Pooja :

Though India is a democratic country, we still have to pay to get what is our right. Corruption is the base for each and every evil thing that happens in India. Nowadays, we see news full of corruption scandals by leaders of the country who are ruling the country. Common man is responsible for the corruption, because he has no options left to complete his work without giving bribe. Corruption will not end unless there is awareness among the people regarding the bad consequences like hike in petrol prices, LPG, and other daily requirements which a common man has to pay for.

Akshita :

Now-a-day we can't find a place where there is no corruption. But by the year 2020, world's 50% of the youth will be in India. If we blame others, nothing will happen and even corrupt people won't change. So we have to be mentally very strong and we must have the determination to make the India the powerful country in the world. That means not only in the sense of money, but we have to be respected by every person in the world due to our cultures and mind set. If we have the courage to achieve a corruption free society, then we will be the number one in the entire world. We should have the confidence that we can achieve anything, not only the corruption free society but also whatever we want to change in our society.

Rushil :

Now, if you all will please allow me to sum up the discussion and put forth the important points as discussed.

We all agree that it is not impossible to achieve a corruption free society, provided, we, the citizen of

India, takes an oath that now and in future we will try to make our country a better place to live.

GD Topics

1. Impact of Social Media on Youth
2. Is India ready to be a Cashless Economy?
3. Women Empowerment in India
4. Role of NGOs in India
5. Does our Education system needs a change?
6. Do we really need Smart Cities?
7. Justice delayed is justice denied
8. Is the youth of India confident or confused?
9. Problems Unite Us Religion Divide Us
10. Morals and Values among Indians is Degenerating

5.8 Verbal Analogy

1. particular: fussy :: _____ : subservient
 a. meek b. above
 c. cranky d. uptight [Ans. : a]
2. pill: bore :: core : _____
 a. center b. mug
 c. bar d. placebo [Ans. : a]
3. gerrymander: divide :: filibuster : _____
 a. bend b. punish
 c. delay d. rush [Ans. : c]
4. vapid: _____ :: rapid : swift
 a. inspired b. turgid
 c. wet d. insipid [Ans. : d]
5. quixotic : pragmatic :: murky : _____
 a. rapid b. cloudy
 c. clear d. friendly [Ans. : c]
6. nymph: _____ :: seraphim : angel
 a. maiden b. sinner
 c. candle d. priest [Ans. : a]
7. shallot: _____ :: scallop : mollusk
 a. shark b. muscle
 c. dessert d. onion [Ans. : d]



- | | |
|---|--|
| 8. _____ : excerpt :: exercise : maneuver
a. exception b. passage
c. routine d. cause [Ans. : b] | 20. folderol: _____ :: benevolence : charity
a. cash b. greed
c. nonsense d. event [Ans. : c] |
| 9. vaunt: boast :: skewer : _____
a. flaunt b. criticize
c. prepare d. avoid [Ans. : b] | 21. stiff: supple :: fierce : _____
a. rigid b. subtle
c. ferocious d. tame [Ans. : d] |
| 10. somnolent: nap :: truculent : _____
a. sleepwalker b. journey
c. war d. mood [Ans. : c] | 22. often: seldom :: obsolete : _____
a. antiquated b. current
c. round d. mixed [Ans. : b] |
| 11. hanker: _____ :: ponder : think
a. junk b. fool
c. yearn d. bunker [Ans. : c] | 23. abandon: reclaim :: abate : _____
a. abolish b. debate
c. rise d. level [Ans. : c] |
| 12. seemly : _____ :: torrid : scorching
a. burnt b. invisible
c. attractive d. horrid [Ans. : c] | 24. canonize: unshroud :: ignore : _____
a. gape b. jibe
c. bunk d. slag [Ans. : a] |
| 13. secret: furtive :: audible : _____
a. resonant b. nap
c. sack d. ring [Ans. : a] | 25. duvet : _____ :: beret : head
a. ceiling b. legs
c. bed d. neck [Ans. : c] |
| 14. sniff : inhale :: _____ : lop
a. crush b. snit
c. snip d. adhere [Ans. : c] | 26. impious: _____ :: indignant : irked
a. furious b. irreverent
c. irksome d. unfriendly [Ans. : b] |
| 15. decrescendo: _____ :: recession : economy
a. crescendo b. finance
c. boom d. volume [Ans. : d] | 27. slack: _____ :: plucky : courageous
a. tight b. silent
c. negligent d. cowardly [Ans. : c] |
| 16. thumbtack: _____ :: hook : coat
a. nail b. poster
c. wall d. hammer [Ans. : b] | 28. _____ : ignominy :: equity : fairness
a. fame b. shame
c. inequality d. balance [Ans. : b] |
| 17. _____ : blow :: stain : spill
a. welt b. wind
c. blotch d. rug [Ans. : a] | 29. invective: abuse :: imposture : _____
a. sham b. imposition
c. injection d. insurrection [Ans. : a] |
| 18. indifferent : _____ :: ardent : zealot
a. stoic b. altruist
c. cynic d. zealous [Ans. : a] | 30. _____ : obfuscate :: hinder : help
a. obscure b. whip
c. lie d. explain [Ans. : d] |
| 19. logorrhea : words :: _____ : money
a. cash b. wealth
c. mint d. pesos [Ans. : b] | |

5.9 Reported Speech

If we report what another person has said, we usually do not use the speaker's exact words (direct speech), but reported (indirect) speech. Therefore, you need to learn how to transform direct speech into reported speech. The structure is a little different depending on whether you want to transform a statement, question or request.

Follow the guidelines to change direct speech into reported speech :

Direct Speech	Reported Speech
a week ago	a week before
here	there
last weekend	the weekend before / the previous weekend
next week	the following week
now	then
these days	those days
this evening	that evening
today/this day	that day
tomorrow	the next/following day

1. Change Simple Present - **says** (that) to Simple Past - **said** (that)
2. Said, told and asked are the most common verbs used in indirect speech.
3. We use asked to report questions.
4. For statements
 - Remove the quotation marks in the statement
 - Use the conjunction 'that'
 - Change the reporting verb 'say to' into 'tell'
 - Change the reporting verb 'said to' into 'told'
5. For Interrogative sentence
 - Remove the quotation marks and question mark in the interrogative sentence.

- Use 'if' or 'whether'

1. Rewrite the following into reported speech:

- (a) The teacher said, "Have you completed your assignment?"
- (b) The student said, No, madam, I will submit it tomorrow."

2. Rewrite the following into direct speech :

Sara requested her teacher whether she can meet him at 2o' clock on the same day.

The teacher replied that she can meet him the next day in the conference hall.

3. Rewrite the following short conversation in the form of a reported speech:

Prakash : Sir, it's a remarkable plan. How do you plan to make yours a zero carbon city?

Minister : Our city will very soon run on renewable energy. Since we have a hot climate nine months, we have solar panels to trap the sun's heat.

4. Rewrite the following short Conversation in the form of a reported speech:

James : I want a room for two persons.

Receptionist : How many days will you stay here ?

James : Two days, please

Receptionist : There is one Non-AC room on the first floor room number is 235.

James : Thank you.

5. Rewrite the following dialogue in a reported speech :

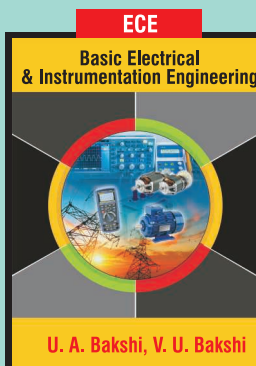
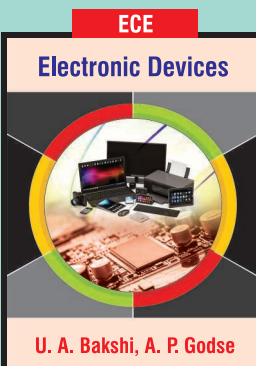
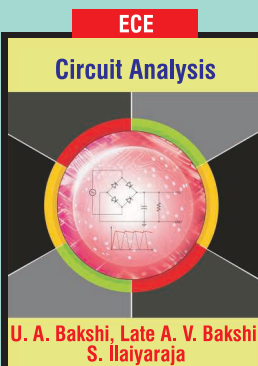
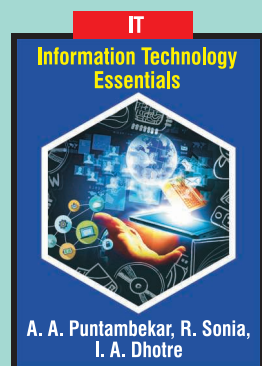
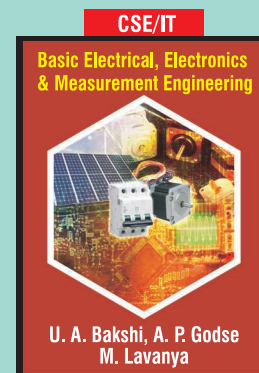
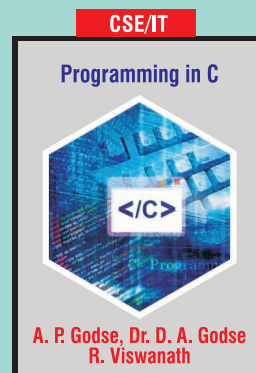
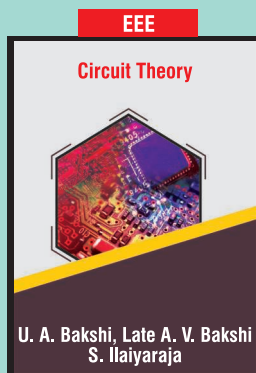
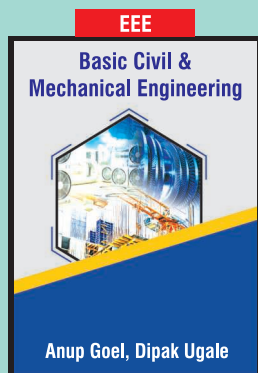
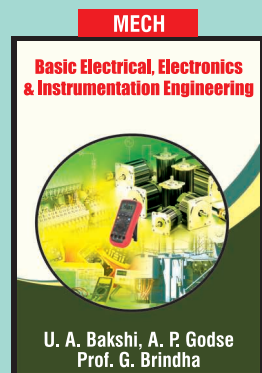
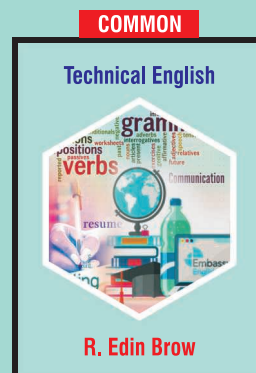
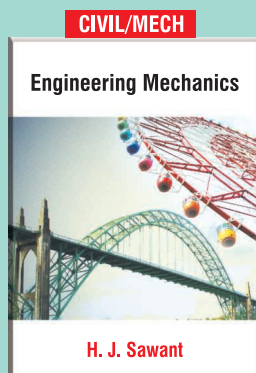
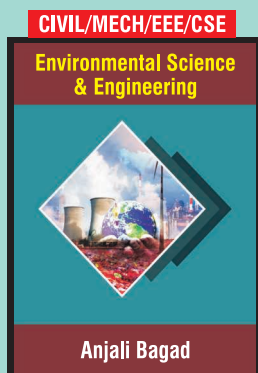
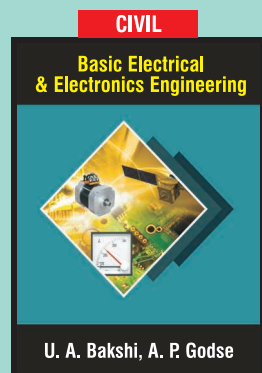
Mohan : "What are you doing here, Nisha? I haven't seen you since June."

Nisha : "I've just come back from my holiday in Kerala."



Notes

For Semester - II (COMMON) . . .



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