

Information Technology

CBSE Code: 402 (Skill)

Class IX and X

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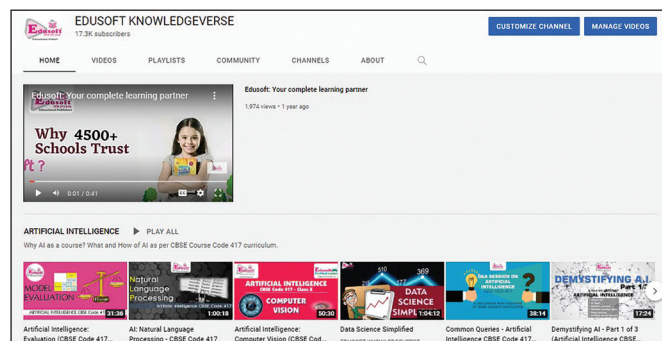
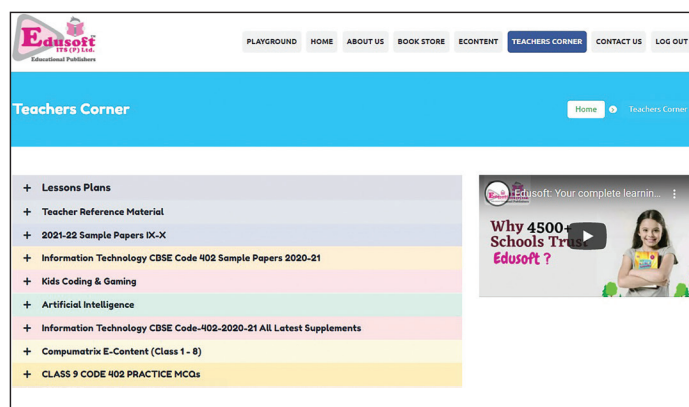
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Class IX

Employability Skills

Unit 1: Communication Skills-I

SESSION 1: Communication Cycle

Exercise

- 1. List the main components of communication process.**
The main components or elements of communication process are sender, message, encoding, communication channel, receiver, decoding and feedback.
- 2. Who is responsible for the encoding of the message?**
Encoding of the message is done by the sender before sending it to the receivers.
- 3. Who is responsible for decoding the message?**
Decoding of the message is done by the receiver after receiving the message.
- 4. List 3 scenarios of technology-based communication?**
Three scenarios of technology communication are conversation over telephone, online chat and video conferencing.
- 5. What do you mean by the channel of communication? Give some examples.**
The medium of communication is called communication channel such as oral, written, technology-based.

Exercise

- 1. Describe a scenario where all the major factors of effective communication come in effect.**
One such scenario is classroom. Sender and receiver are teacher and students respectively. The mutually accepted communication code is the discipline in the classroom wherein students will pay attention to what teacher is explaining. Teachers encode the message i.e., simplify the concept to be taught with her explanation. Students receive the message and with their attentive mind, try to understand the explanation given by the teacher (decoding). Then teacher enquired whether they understood the concept or not by asking questions. This is feedback.
- 2. List any 4 most important characteristics of effective communication.**
 1. Communication should be clear in content and purpose.
 2. Communication should be complete with least scope of questions.
 3. Communication should be based on right facts and should not be vague.
 4. Effective communication leads to desired output and achievements.
- 3. Relate a real-life scenario depicting communication barrier of environment.**
During summers, a hot classroom is there with students and teachers. Due to the heat, students find it difficult to concentrate on what teacher is explaining and teacher is also uncomfortable.
- 4. Give real life example of communication barrier due to personality traits of the communicators.**
A person who is not well conversant in English is trying to sell an item to a customer who understands English only. Another example: two persons from vastly different cultures, say Japan and India, trying to exchange their ideas for the first time.

SESSION 2: Methods of Communication

Exercise

- 1. Describe a scenario where oral communication is most effective as compared to written.**
Teacher's explanation in the classroom, a leader addressing a gathering of people, two persons discussing a matter to resolve a dispute between them.
- 2. List any 3 scenarios where written communication is most effective.**
Written communication is most effective in formal setups like official orders, legal notices, agreement with terms and conditions, pact signed between two governments etc.

3. **List any 2 major advantages and disadvantages of non-verbal communication.**

Advantages of Non-verbal Communication

1. Non-verbal communication complements oral and audio visual communication.
2. It substitutes for the verbal communication like speaking with proper eye contact and tone.
3. Disadvantages of Non-verbal Communication
4. Sometimes non-verbal communication becomes vague and sends wrong signals.

You cannot stop non-verbal communication.

4. **List any 3 major advantages and disadvantages of AV communication.**

Advantages of AV Communication

1. Use of internet and video conferencing saves cost incurred otherwise on scaling geographical barriers, physical movement of participants and other related expenses like lodging, food etc.
2. It is an effective way to explain complex ideas and concepts easily.
3. Technology makes it reusable and easy to distribute.

Disadvantages of AV Communication

1. It incurs a lot of cost in infrastructure.
2. It needs maintenance of equipment.
3. Technology and equipment can be complex to operate and learn.

SESSION 3: Communication Perspectives

Exercise

1. **Describe a scenario where your visual perspective affected your decoding of a message.**

Seeing a man in plain, simple clothes with an ordinary personality, we assume that the person is not very bright and not sufficiently wealthy while actually he could be a learned college professor earning a handsome salary.

2. **Relate an example where you interpreted a message depending on your past experiences.**

After receiving a bad response from the customer care persons of the company which sold me a TV, I did not buy air conditioner from them.

3. **What do you mean by prejudice?**

Believing the information about someone without verifying the facts and disliking the person accordingly is called prejudice.

4. **How our beliefs, emotions and environment influence our communication perspective?**

We relate with people according to our value system and beliefs. During communication, our negative emotions affect the process badly. Reacting in anger spoils the conversation. Our environment determines how we communicate. When we are with friends on a picnic, our style of communication is different as compared to that in the classroom in front of teacher.

SESSION 4: Basic Writing Skills

Exercise

Types of Phrase: pleasantly surprised (adverbial), meeting her friend (verb), at the airport (prepositional), had been sitting (verb), the waiting lounge (noun), Lata spotted her (verb), both shared (verb), a lot of experiences (adjective), of their exciting lives (adjective), time flies very fast (noun, verb and adverb mix), boarded the same flight (verb), bound to Mumbai (noun).

NOUN	PRONOUN	VERB	ADJECTIVE	ADVERB	PREPOSITION	CONJUNCTION	INTERJECTION
Girl	Her	Lived	Poor	Very much	On	Who	Wow
Anna	She	Thought	New	Suddenly	In	So	Alas
Mother		Loved	Useful		To	And	
Year		Thinking	Beautiful			Which	
Gift		Sew	Long			But	

Hair		Buying	Colourful				
hair ribbons		Wished	Too old				
Clothes		Buy	Shining				
Villagers		Did	Enough				
set of needles		Got	Short				
Threads		Called					
glass box		Said					
Money		Have					
Idea		Saying					
eve of new year		Removed					
Cap		Showed					
Barber		Bought					
		Selling					

Exercise

A. Fill in the blanks with the suitable article:

- | | | | |
|--------|----------|------------|--------|
| 1. The | 2. The | 3. An | 4. A |
| 5. The | 6. An, a | 7. An, the | 8. The |

B. Is there anything wrong with these sentences? Why?/Why not?

“The” will not be used before nouns here.

- | | |
|--|---------------------------|
| 1. My brother plays cricket. | Abstract Noun |
| 2. She likes chocolates. | Plural noun |
| 3. Everything that glitters is not gold. | Name of metal |
| 4. I returned the book to Ram. | Proper noun - Ram |
| 5. Breakfast is ready. | Abstract noun - breakfast |
| 6. My favourite colour is blue. | Name of the colour |

Exercise

Travelling is fun with adventure. It is a good hobby as it presents opportunities to visit new places and meet interesting people. Travelling lets us make new friends in far places. We get to learn about various cultures, a variety of languages and cultures. Visit to different places enhances knowledge and we meet different people. It accounts for good health since a tourist is an active and dynamic person. Travelling keeps us fit. Travelling is also a good career option. One can write about the places travelled and publish them in the form of books, blogs and articles. When we meet different cultures and people, we develop an understanding about them. It inculcates good habits such as patience, care, love and concern for others. The overall benefit of travelling is that it improves personality. The only downside of travelling is that it is an expensive hobby. It needs money to travel to different places. Food, stay and other related expenses make it an exclusive hobby. It also claims a lot of time.

Assessment

1. What do you mean by the term Communication? List the features of effective communication.

- Communication is a process to give to and receive information from others. Interacting with others while exchanging information is called Communication. The features of effective communication are:
- Effective communication is clear, complete and based on right facts.
- In written form, communication is be concise and to-the-point.
- Good communication develops relationships, promotes confidence and creates goodwill.
- Effective communication leads to desired output and achievements.
- Effective communication establishes responsibility and accountability.
- It provides right kind of persuasion, guidance and consultation.

2. **You need to prepare for a classroom presentation of 10 minutes. How will you ensure effective communication while presenting?**

Following points will ensure effective communication during presentation:

1. The purpose and objectives of presentation should be mentioned clearly.
2. The language of explanation should be simple and correct.
3. Explanation should cover right facts, clearly and in crisp manner.
4. The voice, expressions and gestures should reflect confidence.
5. There should be some time spared for the audience to have their queries cleared.

3. **Describe any 2 communication barriers.**

1. Barriers to effective listening: We jump to conclusions. Mind gets lost in thoughts while listening. Our emotional state, our capacity of patience, our temperament, likes and dislikes are common barriers in effective listening. Sincere and attentive listening is required for receiving and decoding of the message successfully.
2. Barriers related to the personality traits of the communicators: We sometimes exhibit following behavioural or personal traits which act as barriers to effective communication:
 - Behaviour due to age difference, attitude, gender, cultural and social differences etc.
 - Proficiency of the sender and the receiver in the language they are using to communicate.
 - Ailments, disappointments, personal grudges and hidden intentions.

4. **You are conversing with your friend about something important in a roadside open café in a crowded market. Your friend has to rush to receive his mother from the airport also. What are the communication barriers in this scenario? How these could have been taken care of?**

This is an example of situational barrier. Noise and other distractions are there. Friend is also in rush to airport. These barriers could have been avoided by fixing a prior appointment with the friend and deciding a quiet place to converse.

5. **Briefly explain the terms Coding and Decoding taking a simple example.**

Coding or encoding means how the message has been communicated by the sender. If the manner of the message is rude or offensive or if the message is not clear or incomplete then message is not encoded correctly.

For example:

Authoritative message - I want the report on my table first thing in the morning without any excuses.

Normal message – Please manage to get the report tomorrow for sure so that things are not delayed further.

Decoding means how the message has been interpreted by the receiver.

Authoritative message - I want the report on my table first thing in the morning without any excuses. – here, receiver feels offended and pinned down. He is demotivated to prepare the report and may not do it by inventing a genuine looking excuse.

Normal message – Please manage to get the report tomorrow for sure so that things are not delayed further. – here, message is levelled. It respects the receiver and prompts him to prepare the report.

6. **Describe communication cycle with a simple example.**

Communication Cycle involves following elements. Communication channel is oral, face-to-face.

Sender: Your article needs too many corrections and modifications before we send it to print. [Here message is not encoded effectively]

Receiver: I spent whole night, cutting on my sleep preparing this article. [Here, receiver has not taken the critique positively. He responds by giving an excuse. (Feedback)]

Sender: We really appreciate your effort in getting that article ready in such a short time but there are certain parts of it we need you to look at and revise before we get it into print. [Message is re-encoded in a better form after feedback from the receiver]

Receiver: Okay, let me know which parts and I shall redo it. [Receiver has decoded the message as desired since it was encoded well after the feedback]

7. **How is oral communication different from written communication?**

ORAL COMMUNICATION	WRITTEN COMMUNICATION
1. It is fastest and easiest hence more effective.	1. Time taking and more efforts are required.
2. Sender and receiver are present in person.	2. Sender and receiver need not be present in person.
3. Suitable for formal and informal modes of conversation.	3. Mostly suitable for formal communication.
4. Creates lesser misinterpretation.	4. Written messages have no emotions and body language involved hence they can be misinterpreted.
5. Cannot be used as evidence.	5. Can be used as evidence of conversation.
6. Cannot be referred to later on.	6. Can be referred to later.

8. **List the advantages of written communication.**

There is an advantage of time for choosing suitable vocabulary and tone of the message. Message can be reviewed before sending.

- It has legal acceptance in most of the cases.
- Longer messages can be created.
- Can be referred to later.
- Written messages can be duplicated and distributed.
- Effective written messages help building good relations.
- With written messages comes responsibility.

9. **List any 4 body language features that influence our communication.**

Voice, gestures, posture, facial expressions.

10. **Explain briefly how verbal and non-verbal communication occur using Audio-visual aids.**

Any verbal or non-verbal communication that involves vision and auditory capability is called audio-visual communication. For example, telephonic conversation involves hearing while video conferencing involves both sense of sight and vision.

Such communication is supported by technology. Telephone equipment, smartphone, Internet, visual displays, speakers, microphones, communication channel, presentation software, models, visual aids, video and audio player software etc. constitute AV communication.

11. **You have to make a presentation on your achievements in school to a global audience including students of other cities over video conferencing. How will you take care of your effective communication?**

Following points will ensure effective communication during presentation:

1. Prepare well and rehearse if possible.
2. Body language should be positive.
3. State the objectives of the presentation first.
4. The language of explanation should be simple and correct.
5. Explanation should cover right facts, clearly and in crisp manner.
6. The voice, expressions and gestures should reflect confidence.
7. There should be some time spared for the audience to have their queries cleared.

12. **What are the disadvantages of non-verbal communication?**

Disadvantages of Non-verbal Communication

- Sometimes non-verbal communication becomes vague hence misinterpreted.
- It cannot be stopped.
- It occurs too fast and simultaneously hence difficult to interpret.
- It has cultural and regional differences.

13. **Explain the importance of gestures and eye contact while you speak to someone in person.**

Gestures: Gestures make the major part of our body language. Gestures that occur in the control of our subconscious mind convey our state of mind like Movement of hands, fingers, legs. Gestures made consciously are pointing with finger, nodding, waving, envisaging using hands.

Eye contact: The way we make eye contact tells a lot about us. Right kind of eye contact reflects confidence and sincerity. Eye contact could be gentle, steady, formal for a few seconds, sweeping, stare or gaze.

14. How does our attitude determine the effectiveness of our communication?

Our attitude builds our behaviour and response to a message. Our positive attitude helps us in relating others easily and on good terms. This makes the base of effective and positive communication while our negative attitude builds a hostile environment. We cannot relate with others positively which leads to ineffective communication. A positive attitude means the person is cheerful, open, optimistic, confident and orderly while negative attitude means stubborn, hopeless, bad intent and lack of enthusiasm.

15. Describe any two factors that influence our perspective in communication.

Visual Perspective: We judge and make decisions on visual perspective like how someone looks and dresses up. Who the person is? How important or unimportant he or she is? etc. In accordance to this visual impression, we decide to develop relationship with the person and communicate with him or her.

Perspective of language: Words have different meanings depending on the context. A good listener catches the meaning and intent. Language and figures of speech give different meanings to the message. Synonyms and idioms change our perspective. We should understand the message in its context.

16. What care should we take while we meet and talk to a person for the first time?

First, we should ensure that the environment and surroundings are suitable to communicate. Our perspective helps us understand people and situations. Our perspective determines how we encode a message as a sender and how we decode it as a receiver. While communicating with others we should use the simple and suitable language, we should not judge the person through some preconceived notions, our attitude should be positive, and we should not carry any prejudice based on our past experiences. We should also show emotional intelligence.

17. Ravi met a few people in a party and was mixing up well with those wearing expensive clothing and fair complexion. Which factors are influencing Ravi's perspective towards the people?

Visual perspective.

18. How do our past experiences shape our communication perspective? Cite an example.

Our personal experiences help us develop perspective. If I have a disappointing experience with a service company, I shall avoid using the service of that company in future. Any positive experience helps us meet and relate with people positively.

19. How is a phrase different from a sentence? Give 2 examples.

A set of words that indicates some object or action but does not make complete sense is called a phrase while a group of words that makes complete sense is called a sentence. For example:

Phrase: a beautiful frock Sentence: She is wearing a beautiful frock.

Phrase: is eating Sentence: Raj is eating a mango.

20. Giving 2 example each, explain Noun, Adjective, Verb and Adverb.

Noun is name of a person, place, thing, event, animal or idea. For example, Suman goes to school. I am reading a book.

Verb is any action or state of being. Like, Suman goes to school. I am reading a book.

Adjective describes a noun or pronoun. E.g., I am reading an old book. He is wearing a red cap.

Adverb describes a verb, another adverb or adjective. E.g., He walked down the hill quickly. He looked at her angrily.

21. What is preposition? Give 4 examples of preposition.

Preposition shows the relationship of one noun, pronoun or noun phrase with other. For example, the dog is sitting *under* the table. There are two birds in the bush. I kept the pen on the table. There is a mango among the apples.

22. How do articles differ in usage for consonants and vowels? Explain with 2 examples.

Article 'an' is used before vowel sounds and 'a' is used before a consonant sound. For example, He eats an apple daily.

Butterfly is an insect. They bought a book. I saw an aeroplane.

23. Cite 4 examples where article 'The' should not be used.

Gold is an expensive metal.

Both Ravi and Raj went on a picnic today.

I like to eat fruits once a week.

I selected some fresh fruits from the basket.

24. What are the basic rules of good paragraph writing?

1. The topic on which the paragraph needs to be written should be clear.
2. A paragraph should begin with the topic sentence.
3. Major part of paragraph should include the sentences which elaborate on the topic more.

4. Paragraph should end properly with a closing sentence or conclusion.

25. What do you mean by interjection and conjunction? Explain with 2 examples each.

Interjection reflects strong emotions, followed by exclamation sign (!). Like, Oh! Hey! Wow! Alas! Etc.

E.g., Hey! Where have you been so long? Wow! This idea of picnic sounds great.

Conjunction connects two words, phrases or sentences. Like: so, but, and, or, therefore etc.

E.g., I would have loved to come for the party, but I have my exam tomorrow.

He was down with fever, so he didn't come to the school yesterday.

26. Write a paragraph to describe a train journey you took last.

On our summer vacations, we planned to catch a late evening train to reach Lucknow overnight. On the day of journey, it was raining heavily. We took a taxi to the railway station. As we reached near the railway station, we got stuck in a thick traffic jam. Afraid of missing our train, we paid to the taxi driver and rushed with our luggage on foot towards the railway station in the heavy rain. Completely drenched in water, when we reached the railway station, found that train was already late by half an hour. We changed our clothes in the wash room in the waiting room. Finally, the train arrived, and we boarded the train. We reached Lucknow the next day early morning welcomed by a bright and pleasant weather.

27. You need to write an essay about your favourite leader. Which basic writing skills would you apply in doing so?

1. An essay includes more than one paragraph. We need to apply follow basic writing skills:

2. Correct usage of grammar.

3. Give brief introduction about the leader, describe his qualities as a great leader, his achievements and failures too. How he learnt from his failures. How he influenced people positively and other important incidents of his life.

4. Keeping the sentences simple and short.

5. End the essay with a brief conclusion.

28. Identify parts of speech in the following paragraph:

NOUN	PRONOUN	VERB	ADJECTIVE	ADVERB	PREPOSITION	CONJUNCTION
Deforestation	These	Remove	Large	Never	In	When
Humans		Clear				Or
Forest lands		Clearing				And
Areas		Is				Since
Ecosystem		Are				
Trees		Replanted				
Animals		Destroyed				
Living things		Endangered				

Test Your Knowledge

- | | | | | | |
|-------|-------|-------|-------|-------|-------|
| 1. D | 2. D | 3. B | 4. D | 5. B | 6. A |
| 7. C | 8. D | 9. C | 10. D | 11. A | 12. C |
| 13. C | 14. A | 15. B | 16. D | | |

Unit 2: Self-Management Skills-I

SESSION 1: Meaning and Importance of Self-Management

Exercise

1. What are the benefits of self-discipline?

The benefits of self-discipline are as below:

- We have a pleasant personality.
- We inspire others too for self-discipline.
- We can think and plan clearly.
- Ability to identify our weaknesses and improve upon them.
- Realising our strengths and their use.
- Self-respect and respect for others.

- Understand importance of time.
 - Higher achievement rate.
 - People like and respect us.
2. **What do you mean by S.M.A.R.T target?**
 SMART targets are clear, crisp and specific. The achievements of targets should be measurable. Targets should be achievable - not too difficult to achieve and too easy on efforts. Targets should be realistic – achievable with our abilities. Targets should be time-bound – they should be achieved in a set timeline.
 How is time management important in achieving targets?
 We plan our goals according to the available time and resources. Managing the time includes keeping track of how much time we utilise in achieving our targets and finishing our tasks. We should plan well to avoid spending more than required time on any task. Keeping track of time and utilising the time wisely helps us achieve our targets easily.

SESSION 2: Building Self-Confidence

Exercise

1. **What are the possible reasons for low self-esteem?**
 Common reasons behind lack of self-esteem or self-confidence are:
 - Fear of failure.
 - Seeking other's approval instead of believing in self.
 - Lack of efforts in overcoming weaknesses.
 - Lack of initiative for any achievable task.
 - Poor or incomplete preparation.
 - Missing opportunities
 - Not learning from failures.
2. **List the factors that influence our self-confidence?**
 The factors that influence our self-confidence are society, culture and community, exposure to media and physical factors.
3. **List some steps that you will deploy to enhance your self-confidence.**
 Steps to enhance our self-confidence are positive attitude, seek and face challenges, positive self-criticism, setting realistic goals, be helpful, keeping right company, emotionally intelligent and healthy use of social media.

Assessment

1. **What do you mean by the term self-management?**
 Managing oneself in order to achieve desired goals and targets is called self-management.
2. **Why is self-management important for us?**
 Self-management helps us in maintaining right kind of discipline to plan our goals and targets and achieve them with hard and smart work.
3. **You need to prepare for the 100 meters race in the annual sports event of your school to be held after 3 months. Which self-management skills do you need for this?**
 The self-management required in such scenario are organising self as per the set goals, controlling, reflecting, self-motivation, self-discipline and time management.
4. **What does the term S.M.A.R.T. stand for?**
 S.M.A.R.T stands for Specific, Measurable, Achievable, Realistic and Time Bound.
5. **What do you mean by goal and target?**
 Goal is our aspiration, dream or ambition to achieve something. Once goal is clear, it is divided into short-term SMART targets.
6. **What is the meaning of a measurable and realistic target?**
 Target should be measurable in such a way that we should be able to tell how much is achieved and how much is yet to be done. Realistic target is one that is possible for us to achieve considering our capabilities and ability.

7. **You need to prepare for a computer quiz to be held next week out of your text book. Which SMART targets would you set for yourself?**
I will check how many chapters in the book need to be prepared. I will prioritise the chapters on the basis of their difficulty and length. Then, I will decide the number of chapters to be covered daily in 6 days.
SMART target:
I will cover N chapters in N hours each day for the quiz.
8. **How does procrastination affect our progress towards our goals?**
Many a times we tend to keep on doing the tasks we like and ignore the other important ones. This is called procrastination. This unknowingly leads to wastage of time and irresponsible behaviour.
9. **How does identifying goals and setting targets ease our preparation in achieving something?**
Identifying goals gives us the clarity of what we need to achieve. It also gives us direction and focus. Targets help us achieving the goal by steadily working towards it. Goal is split into short term targets to be achieved one by one and finally reach the goal.
10. **After achieving a goal, how does reflection help you further?**
After achieving the goal, reflection helps us in improving further. It shows us the positive or negative difference. In case of negative difference, we shall look for what went wrong and how to avoid it next time. Positive difference motivates us to do even better in future.
11. **What is the importance of time management? Why do we have a time table in school?**
Time management helps us understand the importance of time. We avoid activities that waste our time and instead utilise it in achieving our goals. Time table in school is the best example of time management. It helps to cover all the subjects in a given time period. It also ensures that students easily learn and understand the subjects and teachers can easily cover the course. Also, along with studies, other co-curricular and extra-curricular activities could be performed.
12. **How do prioritisation and self-discipline help us in managing time?**
Prioritisation helps us finish important tasks in time. Self-discipline helps us in working towards our goals sincerely.
13. **List any 4 major reasons behind lack of self-confidence.**
Four major reasons behind lack of self-confidence are fear of failure, making weaknesses an excuse, lack of initiative and not being prepared.
14. **How does preparation of something helps in retaining your self-confidence?**
When we are prepared, we know what we are supposed to do in achieving our goals. This naturally gives us self-confidence. Being well informed and suitably prepared is half the battle won. When we are prepared, we are confident. We must utilise time to prepare for what we have to achieve.
15. **Explain any 2 factors that build a person's self-confidence.**
Exposure to Media and Online Social Platforms: We learn a great deal about the outside world from media, movies and the internet. They mould our thoughts and influence our personality. Negative influences like cyber bullying, crime, violence badly affect our personality and the way we perceive the world. Positive influences like learning about other cultures, stories of achievements and inspirations, encourage us to develop a positive personality.
Physical Factors: Impressive physical appearance, pleasant personality and sound mental health are keys to the development of our self-confidence. Instead of worrying about our looks, we must focus on carrying ourselves well, etiquette and manners, confident and positive outlook.
16. **How does media influence our belief system and values?**
Our thoughts are influenced by what we from outside world through television, newspapers, magazines, movies and the internet. Movies, programs, news and online interactions mould our thoughts and influence our beliefs and personality. Negative influences like crime and violence badly affect our personality. Positive influences like cultures, stories of achievements and inspirations, sports, responsible use of social media encourage us to develop a positive and balance belief system and values.
17. **List certain ways to build one's self-confidence.**
Certain ways to build one's self-confidence are having a positive outlook and attitude, always look for new challenges, self-criticism for self-improvement, setting realistic goals and SMART targets, keeping positive people in company, being emotionally stable and controlled and responsible use of social media.
18. **How will you ensure preparedness while working towards a goal?**
Being well informed and suitably prepared is half the battle won. By right planning, setting clear goals and identifying SMART targets we can prepare well for our achievements. Practicing time management and self-discipline helps us prepare better.
19. **How does keeping right company and healthy use of social media shape your self-confidence?**
Feedback from people to learn is good but those who discourage us must be avoided. We should have company of positive people having positive mental framework.

Social media is a tool to learn, explore, meet others and stay friends. Do not let social media be a manipulating tool of yourself. Do not be addicted into spending unnecessary time online. Decide your priorities between amusement and work. Both are necessary so manage time between the two.

20. What are the physical factors that enhance our self-esteem?

Focus on clean appearance, carrying ourselves well, etiquette and manner in dealing with people, confident smile and positive outlook. Knowing our strengths and working on our weaknesses is the key to better personality. Personal hygiene, gentle outlook, positive smile, confident stride and elegant dress code.

Test Your Knowledge

- | | | | | | |
|-------|-------|-------|-------|-------|-------|
| 1. A | 2. C | 3. B | 4. C | 5. C | 6. A |
| 7. A | 8. A | 9. D | 10. C | 11. B | 12. A |
| 13. D | 14. D | 15. B | 16. D | | |

Unit 3: Basic -ICT Skills-1

Note: The sessions that have lab exercises are not mentioned here. Students must solve them in the lab as practical implementation.

SESSION 1: Information and Communication Skills

Exercise

1. How do we use information in various ways?

Information is dealt with by us in following ways:

1. Accessing the information: Various means like computers, communication networks, smart phones help us access information through world wide web.
2. Creation of information: Computers, digital cameras, digital recorders, smart phones, scanners etc. help us create information in various forms like text, audio-video and image.
3. Sharing and distributing information: The internet, communication networks and tools like video conferencing, video chat platforms, smart phones and computers are the tools to disseminate information.
4. Storing and managing information: Databases, computers, storage devices like disks, pen drives, online drives are the means to store and manage information.

2. How are computers useful in our daily life?

Computers help us in almost all aspects of life be it education, entertainment, travel, our profession, using various services, communication, using social media, health care, doing our business, doing financial transactions etc.

3. How computers help in running various businesses and industries?

All kinds of business operations are carried out very easily and accurately by computers. Database of all the business details is maintained by computers. Small shops, supermarkets, big companies, restaurants, small offices use computers for efficient service. People access the services and buy products from businesses online. New technologies like big data and cloud computing provide enormous capabilities to the computers for bright future of industries.

4. Why ICT skills are necessary for us in today's world?

World around us is impossible to believe without the presence of computers. To survive in our trade and profession, we must have necessary ICT skills. Information and communication technology skills make our lives easier by easing our tasks up to greater extent. Availing a domestic service, booking travel tickets, hotel room and flights, ordering food, finding a location using GPS, interacting with people, instant communication are the part of our daily life. It also helps us remain competitive in our career.

SESSION 2: Computer System

Exercise

1. What is the role of input and output devices in a computer system?

Input devices are used to feed input to the computer in different forms like clicking on command with the mouse, typing data through keyboard, scanning image using scanner, feeding video through a web camera and recording audio with microphone.

Output devices generate result of processing in various forms like text, image and video on monitor, hard copy print by printer, maps by plotter, and audio through speaker.

2. **List differences between primary and secondary memory.**

Primary memory is usually not permanent. It loses data once power is switched off while secondary memory is permanent storage. Storage capacity of primary memory is very less as compared to permanent memory which can store data in bulk form. Primary memory is less expensive than permanent memory.

3. **How is RAM different from ROM?**

RAM is main working memory of the computer. It stores the working data of the user as long as computer is powered on while ROM contains permanent instructions. RAM is Read/Write memory as data can be read and written on it while ROM is Read Only memory. Storage capacity of RAM is higher than that of ROM. RAM is upgradable.

4. **What do you mean by peripheral devices?**

In addition to standard devices that form the actual computer system for standard input, output and processing operations there are additional devices which extend the functionality of a computer system such as printing out the content (printer), transmitting messages over network (modem), scanning images (scanner), recording voice and video (microphone and web camera).

5. **Describe any 5 peripheral devices.**

1. **Printer:** It prints out the hard copy of the documents and images over a variety of medium like paper, plastic sheets etc. Ranging from a simple desk jet printer to industry line printer used to print banners and posters, printers come in a wide variety to cater to various printing needs of various industries.
2. **Scanners:** This device is used to scan documents and store them in the computer for later use. A flatbed scanner can scan whole sheets of documents while handheld scanners are useful for quick scanning of a part of a document like a few lines or an image.
3. **Speakers:** Speakers are used to generate sound. They convert analog electric signals into air vibrations. Speakers are used to listen to music and sounds on the computer.
4. **Web camera:** It captures live video stream and still images. It is used in live chats, video conferencing and online classrooms.
5. **Plotters:** They draw maps and designs. They are used for computer aided designing by architects and designers.

6. **Describe the functioning of processing unit.**

A CPU consists of Arithmetic and Logic Unit (ALU) and Control Unit (CU).

1. **Arithmetic Logic Unit (ALU):** The ALU performs all arithmetic operations and logic operations. Logic operations test various logical conditions encountered during processing and different actions to be taken.
2. **Control Unit (CU):** It coordinates the components of a computer system. The control unit manages the execution of program instructions by fetching instructions from memory, parsing those instructions as necessary and then scheduling the appropriate hardware components to act on those instructions.

SESSION 3: Basic Computer Operations

Exercise

1. **List the steps to switch on and shutdown a computer system.**

Switching a Computer System On

1. Switch on the UPS by a long press on its power button.
2. Press the power button on the CPU cabinet or system unit and switch on the monitor.

Shutting down the Computer

1. Click on Start button.
2. In the Start menu, click on Shutdown.
3. Switch off the monitor and then UPS.

2. **What is the use of operating system?**

Operating system controls entire functionality of the computer system. It allows the user to interface with the computer hardware and make use of other software applications on the computer. Common functions are managing hardware devices, managing software and scheduling programs, files and storage management and system security.

3. **What is the GUI?**

Graphical User Interface of any operating system or any application is composed of graphical components such as buttons, menus, windows, toolbars and dialog boxes etc. In GUI, the commands need not to be remembered and it is very easy to work with the help of mouse.

4. **What is the use of a file and folder?**

A file is a collection of related information. In other words, a file is a collection of data stored on a storage device. There

are different types of files depending on the types of information they contain, like document, image file, music file, movie file, etc.

Folder contains files and other folders. Folders help us organise our data.

5. List the main components of a GUI desktop.

Desktop, Icons, Start menu, Taskbar, Program Windows, Dialog boxes and Toolbars etc.

Questions 6 to 8 are practical oriented.

SESSION 4: Internet and Its Applications

Exercise

1. What do you mean by the terms Homepage and Web page?

A web page generally consists of text, images, audios, videos, links, animations, etc. The homepage is the first web page of a website. It provides introductory information and the links to the other pages of the website.

2. What is the role of browser in accessing internet?

A web browser is an application software that is used to access the information (websites) on the web. Mozilla Firefox, Internet Explorer, Google Chrome, Safari, Opera are some commonly used browsers.

3. What is electronic mail? What are its advantages over traditional mail?

The term e-mail refers to Electronic Mail. E-mail is a communication system that sends and receives messages through the internet by using specific e-mail addresses or e-mail IDs.

Advantages of e-mail

E-mail offers many advantages over traditional mailing system listed below:

1. Sending and receiving e-mail is very fast. It is received and delivered within seconds across the world.
2. E-mail is an affordable means of communication as compared to other systems.
3. Sending and receiving e-mail is very easy and convenient. Any type of file can be sent as an attachment through e-mail.

4. Write the steps to compose and send a simple mail without any attachment.

Compose Mail

The steps to compose or create a new mail and send are:

1. Click on Compose button located on the left side pane. A Compose mail frame appears.
2. Type the e-mail address in the To box.
3. Type the subject name in the Subject box to send it with a message.
4. Type your message in the message box.
5. Click on Send button.

5. What is the difference between replying a mail and forwarding a mail?

When we reply a mail, the message goes back to the original sender of the email. Forwarding means sending the mail received from someone to other recipients.

Exercise

1. What is the difference between a blog and a standard website?

Blog, earlier known as Weblog, is an online platform which allows a person to post his/ her views on a particular topic or issue in the form of an online article for other people to visit and go through. Readers can post their comments on the article and this way threads of interaction and dialogues begin. Blog is maintained by blogger or blog writer. Blogs may be the part of a website.

Website is a huge collection of web pages linked together and identified by a web URL. They are maintained by a team of professionals and showcase products and services of an organisation.

2. How a Facebook post different from a Tweet?

Facebook post has no word limit. Tweet is 280 characters max. Posts can be shared. Tweets are forwarded as retweets.

3. Describe the features of Twitter and Whatsapp.

Twitter is social media website where users can post short messages including videos, links and text called Tweets. It needs user account name called Twitter handle. Username is preceded by @ sign.

People can be followed on Twitter timeline displays all the Tweets which are updating amongst your connections. This is called Twitter feed.

WhatsApp is a messaging application that you can download to your smartphone and use to easily send messages to other people's mobile phones freely. It also allows video calls freely by using your phone's data connection. WhatsApp

allows creating groups of your contacts. WhatsApp allows video calling too for all Android versions 4.1 and above.

4. Go to a blogging website and create a simple blog telling about yourself.

Practical assignment.

5. List salient features of Facebook and Youtube.

Facebook

Timeline or wall, Page, Events, Photo Albums, News Feeds, Privacy Settings, Profile picture and Cover Picture etc.

Youtube

It is an online platform dedicated to video sharing. People can shoot videos and upload them on Youtube. It lists the most trending or popular videos. You can search videos or click on the video thumbnails to watch them. Youtube Channel, video playlist, restricted viewing by applying parental control and safety mode.

6. What do you mean by a Youtube channel?

Youtube Channel: People who are regular users of Youtube and upload videos on it are recommended to create a channel. Channel is simple a series or collection of related videos. The advantage of having a channel for creator is that popularity of multiple videos can analysed as one channel. It is easier to manage a channel as compared to individual videos. For users, it is easier to subscribe the channel so that they get reminder about any new video updated by the channel owner.

8. What is Digital India campaign? List its 4 main initiatives.

To ensure that government services and government schemes' information reach to masses online easily, government of India (GoI) launched Digital India campaign in July 2015.

Connecting rural areas over high speed internet connection to bring the remote areas of the country into mainstream and improve digital literacy is the ambitious objective of the campaign.

Its 4 main initiatives are:

1. Access to mygov.in portal that lists details of all the government services and schemes.
2. Multi-channel, multi-lingual, multi-service mobile app Unified Mobile Application for New Age Governance (UMANG) to access all government services over handheld devices.
3. Aadhaar number has enabled to access digital signature service eSign.
4. People can keep digital copies of their important documents over DigiLocker.

9. Go to www.mygov.in and find out various schemes launched by government.

Practical assignment

10. How Whatsapp is different from Twitter? Describe briefly.

Twitter is social media website where users can post short messages including videos, links and text called Tweets. It needs user account name called Twitter handle. Username is preceded by @ sign.

People can be followed on Twitter timeline displays all the Tweets which are updating amongst your connections. This is called Twitter feed.

WhatsApp is a messaging application that you can download to your smartphone and use to easily send messages to other people's mobile phones freely. It also allows video calls freely by using your phone's data connection. WhatsApp allows creating groups of your contacts. WhatsApp allows video calling too for all Android versions 4.1 and above.

Assessment

1. In what ways do we deal with information. Explain very briefly.

Information is dealt with by us in following ways:

Accessing the information: Various means like computers, communication networks, smart phones help us access information through world wide web.

Creation of information: Computers, digital cameras, digital recorders, smart phones, scanners etc. help us create information in various forms like text, audio-video and image.

Sharing and distributing information: The internet, communication networks and tools like video conferencing, video chat platforms, smart phones and computers are the tools to disseminate information.

Storing and managing information: Databases, computers, storage devices like disks, pen drives, online drives are the means to store and manage information.

2. Explain any 2 roles of ICT in our personal daily life.

Entertainment: Presentation of content today has gained completely a different level. Entertainment, news and field of journalism are greatly supported by computers. Sports, online games, movies, songs, web series, video interaction with others have taken the entertainment to a next level.

Social Media: Sharing ideas, information, your personal views, achievements, setbacks or any news with almost anyone and everyone across the globe in moments over internet is due to the World Wide Web running on networks of computers. Integrated chat services, photo sharing services, video uploads and video interactions are a routine

today. Facebook, Whatsapp, Snapchat, Skype and YouTube have entirely changed the way we connect with people. Writing, photography, filmmaking, singing, video editing, video consulting, online coaching, relationship advice are new opportunities today.

3. In which 2 industrial or business areas ICT is playing an important role and how?

Health Care: Online diagnostic services, creatively designed medical equipment, consultancy services, personal doctor on-call, personal online physical trainer etc. are the examples of ICT intervention in health care.

Banking Industry: Entire financial industry all over the world relies and runs over computers and sophisticated communication infrastructure. Computers are used by banks to maintain the financial database, customers and day to day transactional details. Instant online transactions, secured transfer of funds, encrypted communication of data, verifying authenticity, efficient customer support, reaching out with financial schemes to mass – this all has been greatly revolutionised using computers.

4. Why is keyboard called standard input device?

Most of the input is given in the form of commands and text to the computer. Since the advent of modern computers, keyboard has been the device used to give input to the computer hence it is called the standard input device which completes the computer system.

5. What is swift triple mouse click?

Swift triple mouse click selects the whole paragraph.

6. How do ALU and CU aid in data processing by computer?

The arithmetic-logic unit (ALU) performs all arithmetic operations and logic operations. Logic operations test various logical conditions encountered during processing.

Control Unit (CU) is the circuitry that issues commands to other hardware components to execute programs. It manages the execution of program instructions by fetching instructions from memory, parsing those instructions as necessary and then scheduling the appropriate hardware components to act on those instructions.

7. List any 2 main functions of CPU.

Functions of CPU

1. The CPU accesses and stores the relevant data and instructions during processing.
2. The CPU controls the sequence of operations.

8. Why ROM and RAM called primary memory?

RAM is used to store primary working data of the user and ROM stores instructions required to start up and boot the computer. Without these two, computer cannot start up and function hence they are called primary memory.

9. How is ROM different from RAM?

RAM is main working memory of the computer. It stores the working data of the user as long as computer is powered on while ROM contains permanent instructions. RAM is Read/Write memory as data can be read and written on it while ROM is Read Only memory. Storage capacity of RAM is higher than that of ROM. RAM is upgradable.

10. Why printer is called a peripheral device while not the keyboard?

Computer can still work in absence of a printer. If a printout is required, printer can be attached and installed with the computer anytime. Printer only extends the functionality of the computer but it is not very necessary part of it.

11. Explain any 2 storage devices.

Digital Card Reader-Writer

Digital card readers are found in devices like laptops, digital cameras and smart phones. These devices have slots to read from and write on the memory cards. These cards are available in various storage capacities ranging from 16 GB to 1 TB.

External Hard Drives

In addition to computer's main storage device – Hard disk there are external hard drives available. They can be easily connected with the computer through USB port. External drive is the best suited device for keeping backup of the computer data since it can store data in the range of 500 MB to 2 TB or even more in near future.

12. Explain the optical disks briefly.

Optical discs can store information or data like video, audio, text, images, games, software etc. Various types of optical discs are available which can store up to 8 GB data.

D-ROM stores data for distribution for example, music CDs. It is read-only storage media. It stores data up to 700 MB.

There are following types of CDs:-

CD-R (Compact Disc Recordable): Data can be written once but read many times from it.

CD-RW (Compact Disc Re-Writable): It allows us to erase previous data and write new data on them.

13. What is the basic difference between a printer and a plotter?

Printer prints out the hard copy of the documents and images over variety of medium like paper, plastic sheets etc. while plotters draws or plots building maps or product designs. It is used by architects and product designers. A Plotter

prints high-quality graphics or drawings.

14. What is operating system? List any 2 functions of operating system.

Operating system controls entire functionality of the computer system. Operating system allows the user to interface with the computer hardware and make use of other software applications on the computer.

Two Functions of Operating System

Managing hardware devices: Controls functioning and interaction among devices.

Managing software and scheduling programs: Keeps track of installed software and allocates/ deallocates memory to the required programs.

15. Describe any 4 types of operating system.

Single User OS: Such operating systems allow one user at a time on a system. Examples: DOS and Windows 95

Multi-User OS: Such operating systems support more than one user at a time on the same computer. Examples: Windows 7, Windows 10, Linux, Unix.

Command Line User Interface OS: Such operating systems provide command line interface for user to type the commands. E.g., DOS, Unix

Mobile OS: This operating system controls hand-held devices such as smartphones and tabs. E.g., iOS, Android.

16. How is application software different from an operating system?

Application software are used to perform various tasks in a variety of fields while operating system controls the functioning of the computer system.

17. Why operating system needs to be loaded first in computer's memory when it is switched on?

Operating system controls entire functionality of computer system, it manages other software applications on the computer, devices connected to it and memory. It also provides user an interface to work with computer. Until the operating system is loaded in computer's memory, user cannot work on the computer therefore operating system should load very first.

18. List any 4 parts of a GUI.

Desktop, Start Menu, Task bar, Icons, windows etc.

19. What do you see on a desktop generally?

Every GUI component appears over the desktop. On the desktop, icons of shortcuts of various programs, Recycle Bin, Computer and Network are seen. In the background either colour is set or a wallpaper is there. At the bottom, Taskbar is situated.

20. What is the role of folders?

Folders store files and other folders called sub-folders. They help us organise our data in various folders.

21. Describe the use of taskbar in Windows.

Taskbar is usually found on the bottom of the desktop and displays Start button and system tray. Various parts of the taskbar are:

1. Start Button: The Start button is found on the left side of the taskbar. When we click on the Start button, a menu appears which is known as the Start menu. We can find and open all the programs from the Start menu.
2. Quick Launch toolbar: The Quick Launch toolbar provides an easy access (in single- click) to our favourite programs. These programs can be opened in one click.
3. Middle Section: The Middle Section shows us the programs and files we have opened and allows us to quickly switch between them.
4. System Tray: The System Tray is used to show the date and time and various other notifications.

22. List the advantages of email over traditional mail.

E-mail offers many advantages over traditional mailing system listed below:

1. Sending and receiving e-mail is very fast. It is received and delivered within seconds across the world.
2. E-mail is an affordable means of communication as compared to other systems.
3. Sending and receiving e-mail is very easy and convenient. Any type of file can be sent as an attachment through e-mail.

23. What is the structure of an email address? Give an example.

E-mail addresses or E-mail ID identifies the receiver. It has username followed by @ sign and then name of the email service provider website. info@eduitspl.com is an example of an e-mail address.

24. How will you forward an email along with an attachment?

Steps to forward the mail are:

1. Click on mail, which you want to forward.
2. Now, click on arrow next to the Reply option. A menu appears.
3. Select Forward option. A new frame appears below the mail details, to forward the message.

4. Type the email address of the recipients in To text box and type the text in the message.
 5. Click on the Attachment the File Upload dialog box appears after clicking on Attachment option to select the attachments.
 6. Click on Send button.
- 25. What is a blog?**
 Blog is an online platform which allows a person to post his/ her views on a particular topic or issue in the form of an online article for other people to visit and go through. Readers can post their comments on the article and this way threads of interaction and dialogues begin. Blog is an excellent way to showcase your writing and reporting talents or just to share your thoughts and views in an structured way. A person who writes and maintains a blog is called blogger. Any person who has basic computer knowledge and has drafting skills can create a blog. Some popular blog services are WordPress, Blogadda, Blogger, Tumblr etc.
- 26. How is Facebook a popular social media platform?**
 Facebook is one of the most popular social website that allows people interact with each other for free. Sending and accepting friend requests, sharing videos, pictures and posts, creating pages, events and photo albums and online chat are some exciting features which make Facebook popular.
- 27. What is tweeting and re-tweeting? What do you mean by #savetreescampaign?**
 A post on Twitter is called tweet. Someone reposting anybody's tweet is called retweet.
- 28. Explain Youtube channel and its advantage.**
 Youtube channel allows people to create a collection of uploaded videos. Channel is a series or collection of related videos. The advantage of having a channel for creator is that popularity of multiple videos can analysed as one channel. It is easier to manage a channel as compared to individual videos. For users, it is easier to subscribe the channel so that they get reminder about any new video updated by the channel owner.
 Users can create a playlist of their favourite channels depending on their interests like education, sports, cookery etc.
- 29. How is Whatsapp different from Twitter?**
 Twitter is social media website where users can post short messages including videos, links and text called Tweets. It needs user account name called Twitter handle. Username is preceded by @ sign.
 People can be followed on Twitter timeline displays all the Tweets which are updating amongst your connections. This is called Twitter feed.
 WhatsApp is a messaging application that you can download to your smartphone and use to easily send messages to other people's mobile phones freely. It also allows video calls freely by using your phone's data connection. WhatsApp allows creating groups of your contacts. WhatsApp allows video calling too for all Android versions 4.1 and above.
- 30. What are various Digital India initiatives taken by Indian government?**
 1. Multi-channel, multi-lingual, multi-service mobile app Unified Mobile Application for New Age Governance (UMANG) to access all government services over handheld devices.
 2. Aadhaar number has enabled to access digital signature service e-Sign.
 3. People can keep digital copies of their important documents over DigiLocker.
 4. e-Hospital application to for enquiring about blood donation services, appointments for checkup diagnostics, registration and payment for fees of the service availed.
 5. Swachh Bharat Mission app to promote cleanliness as a nationwide mission.
 6. e-Sampark application to promote communication in regional language.
 7. Pradhanmantri Digital Saksharta Abhiyan to make rural households digitally literate.
- 31. How Digital India campaign will help in rural digital literacy and how will it help in serving masses in a better way? Give your general idea citing some examples.**
 To be answered by student after discussion with the teacher.
- 32. How operating system performs data and storage management?**
 Operating system keeps track of all the data saved in the computer. It manages the data in the primary memory as well as on various storage devices i.e., secondary or auxiliary memory. Following are the data and storage management tasks performed by operating system:
 1. It helps in saving, opening and moving files. Operating system does all this with the help of the file system that determines how your data is stored on a storage device. A file system is a means for operating system to keep track and manage all our data and program files on various storage media like hard disk drive, DVD, pen drive etc. The file search feature of operating system relies upon the file system to locate the file on the storage medium.
 2. Modern operating systems provide features of compressing the bulk files to conserve disk space, encrypt the data, file hiding and folder locking features to prevent unauthorized access.

3. Various utilities available of operating system like Disk Manager allows creating disk partitions and formatting them, defragmenter allows rearranging the data on the hard disk for faster access.
 4. System restore feature allows restoring the system to its original state at a particular date and time.
 5. Backup/ restore allows taking faster backups of data to external storage devices like tapes by checking last updated files and also the restorage of the files during any data loss.
 6. Operating system has a feature called virtual memory manager that uses a designated size of hard disk storage as virtual memory where it moves that data from the primary memory which is not being used by the user while computer is switched on and as soon as it is required the data is reloaded in the memory from the disk. This optimizes the memory usage.
 7. When multiple programs are loaded in the memory, operating system allocates them memory in such a way that the programs do not interfere with each other. When a program is closed then memory is deallocated from it.
- Operating system provides some other features also like RAM check, disk cloning (disk to disk copy), disk mirroring, storing single bulk file across multiple disks in same computer or remote computers, transferring data from one file system to another file system like copying file from Windows NT (New Technology) File System to Compact Disk File System.

33. How can you say that operating system functions as an interface between the user and the computer system?

All the commands and interaction with computer happens through the command interface of the operating system or graphical user interface. Without the user interface provided by the operating system, user cannot use computer hardware, software and other services.

34. Briefly describe the basic components of Windows/Ubuntu GUI like Desktop, Start menu, Icons and Taskbar.

Desktop and Icons

After starting Windows and logging into it, what you see on the screen is a desktop which contains various small pictures called icons. Icons could be shortcuts to other files or programs or icons of Windows system like My Computer (in Windows 10 it is called This PC), Recycle bin etc. Double clicking the icons opens up the program associated with that icon.

Taskbar and Start Menu

Usually, at the bottom of the desktop, you can see a bar stretched from extreme left to right side. A Start button is on the very left end of the Taskbar. Right side of the Taskbar shows system time and date and other small indicators like network connection, language, speaker icon etc. The middle part of the Taskbar displays icons of the active and minimized programs you have opened to work with. Middle part also shows the icons of the shortcuts to your frequently used programs. The process of creating such shortcuts is called pinning the program with Taskbar. It is a good way to quickly access your favourite programs. Such “pinup” can be done with Start menu also. Clicking on the Start button displays Start menu which shows the names of all the programs installed on your computer. These programs are organized under various categories or folders. Start button also shows options to Shutdown, Restart, Sleep, Search and Run the program by typing its executable name.

35. What do you mean by a file and a folder?

A file stores the data created by the user while a folder contains files and other folders. Files are of different types depending on the data they store such as text files, documents, spreadsheets, audio, video, graphics etc. Folders help in organizing the files on the computer. Files have primary name and extension name such as document1.docx while folders just have relevant names.

36. What is the difference between moving and copying a file?

Copying a file means the original file remains in its location and its identical copy is created in another location. Copying is done by pressing Ctrl+C. Moving a file means changing the location of the same file to some other location. To move a file, it needs to be cut by pressing Ctrl+X. The copied or cut file can be pasted to the new location by pressing Ctrl + V.

37. Write the steps to copy a file on a CD inserted in drive F to a folder named Reports on drive D.

Press Windows+E to open Computer window. In the left pane, go to drive F. In the right pane, locate the desired file and select it. Press Ctrl+C. Then, go to drive D in left pane. Locate the folder Reports. Double click on it to open it and press Ctrl+V.

38. You are on the desktop (no window is opened). From here, write the steps to go to D drive and create a folder in it.

On the desktop, open Computer. In Computer window, double click on D Drive. In D drive, right click in the blank area and select New > Folder. Type the desired name of the folder and press Enter key.

39. You have 100 files in a folder. You need to delete only first, fifth, twentieth and ninetieth file. How will you do this?

Click on the first file, press Ctrl key and keep it pressed until you select other desired files as mentioned in the question. Finally, press Delete key on the keyboard.

40. You have 100 files in a folder. You need to delete first 30 files. How will you do this?

Select the first file. Then press Shift key and keep it pressed while clicking on the 30th file. All 30 files will be selected. Press Delete key on the keyboard.

Test Your Knowledge

- | | | | | | |
|-------|-------|-------|-------|-------|-------|
| 1. D | 2. A | 3. D | 4. C | 5. D | 6. A |
| 7. C | 8. B | 9. C | 10. C | 11. B | 12. C |
| 13. B | 14. C | 15. C | 16. D | 17. C | 18. C |
| 19. B | 20. C | 21. A | 22. C | 23. C | 24. D |
| 25. B | 26. A | 27. C | 28. D | 29. B | 30. A |
| 31. D | 32. C | 33. C | 34. A | 35. B | 36. C |
| 37. A | 38. C | 39. D | 40. A | 41. A | 42. C |
| 43. A | 44. A | 45. C | 46. B | 47. B | 48. B |

Unit 4: Entrepreneurial Skills-I

Note: The sessions that have lab exercises are not mentioned here. Students must solve them in the lab as practical implementation.

SESSION 1: Types of Business and Business Activities

Exercise

1. What is the difference between corporation and cooperative?

A corporation is a business organization that has a separate legal personality from its owners. Ownership in a stock corporation is represented by shares of stock. The owners enjoy limited liability but have limited involvement in the company's operations. The board of directors, an elected group from the stockholders, controls the activities of the corporation.

A cooperative is a business organization owned by a group of individuals and is operated for their mutual benefit. The persons making up the group are called members. Some examples of cooperatives are water and electricity cooperatives and housing cooperatives.

2. List any 4 essential business activities.

Human resources, customer service, accounting and sales.

3. Describe any 3 business activities necessary to run the business briefly.

Accounting: Accounting is to track the money taken in and the money spent by the business. Retail businesses with a high number of transactions use daily accounting. Keeping up to date on expenditures and income allows you to see where you earn and where your business loses money.

Budgets and Finance: Implementing a budget helps us control costs. For smaller businesses, budgets may consist of little more than a monthly allotment to cover overhead, insurance and payroll. Larger businesses need to set out a big budget on an annual basis. Budget includes expected revenue and costs that are updated regularly.

Sales: Sales are the heart of all businesses. Depending on the industry, sales are done by dedicated sales teams that develop prospects into clients, perform demonstrations and maintain contact with the existing client base.

SESSION 2: Entrepreneurship: Meaning and Characteristics

Exercise

1. How entrepreneurs positively contribute to society?

Entrepreneurs create opportunities for jobs. Entrepreneurs always look for the ideas to transform the world around them. Entrepreneurs often do more for the greater good than the average person. They make honest money with great struggle and pay for taxes and public services thereby contributing and returning to the economy. Many of them take green initiatives for environment and contribute to the charities for social causes.

2. How is an entrepreneur different from businessman?

Entrepreneurs build up the business process to address a problem with some innovative and useful solution. They constantly improve using the feedback. They usually use public wealth in doing business and thus directly contribute

to the economy. They maintain smaller efficient teams. They usually manage a smaller business entity that can be managed with continuous innovations. They take manageable risks.

3. List the steps of entrepreneurship development program.

Various steps involved in Entrepreneurship development process are:

1. Setting up concrete objectives of the development program
2. Identifying and nominating valid and genuine candidates
3. Program designs focus on local talents and markets
4. Choosing the right location
5. Program impact analysis for future programs

4. List main characteristics of entrepreneurship.

Economic and dynamic activity.

Continuous innovations.

Opportunities and potential for growth and profits.

Taking and tolerating risks.

5. Write a short note explaining rewards of entrepreneurship.

The rewards of entrepreneurship are that the approach of risk-reward opens new doors of growth in the form of opportunities. Despite responsibilities there is greater independence in working. More democratic teams are created. Other rewards are flexible schedules and processes, creativity and productivity with recognition and fame.

Assessment

1. List the various forms of business ownership.

Sole Proprietorship, Partnership, Corporation, Limited Liability Company, Cooperative.

2. How sole proprietorship is different from Corporation?

A sole proprietorship business is owned by only one person. A corporation is a business organization that has a separate legal personality from its owners.

SP is suitable for small businesses and least costly among all forms of ownership. The liabilities of the entire business are faced by the owner. In corporation, ownership in a stock corporation is represented by shares of stock. The owners enjoy limited liability but have limited involvement in the company's operations.

3. What do you mean by LLC?

Limited Liability Company has characteristics of both a corporation and a partnership. An LLC is not considered a corporation but the owners enjoy limited liability like in a corporation. An LLC can decide how it will be taxed as a sole proprietorship, a partnership, or a corporation.

4. How cooperative is different from corporation?

A cooperative is a business organization owned by a group of individuals and is operated for their mutual benefit. The persons making up the group are called members. Some examples of cooperatives are water and electricity cooperatives and housing cooperatives.

A corporation is a business organization that has a separate legal personality from its owners. Ownership in a stock corporation is represented by shares of stock. The owners enjoy limited liability but have limited involvement in the company's operations. The board of directors, an elected group from the stockholders, controls the activities of the corporation.

5. How is manufacturing different from Merchandising?

A manufacturing business buys products and uses them to make new products while Merchandising business buys products at wholesale price and sells the same at retail price.

A manufacturing business combines raw materials, labor, and factory overhead in its production process while a merchandising business sells a product without changing its form.

6. What do you mean by hybrid business type?

Hybrid businesses are companies that may be classified in more than one type of business. A restaurant, for example, combines ingredients in making a fine meal (manufacturing), sells a cold bottle of wine (merchandising), and fills customer orders (service).

7. Describe any two business activities.

Human Resources

Human resources are the employees of the company. They are managed under human resource department. Conducting interviews, hiring applicants and determining benefit packages, addressing interpersonal conflicts etc. are some of HR tasks..

Customer Service

Customer service helps to secure new clients and promotes referrals from your existing clients. Customer-service

departments provide existing customers with a direct contact that offers solutions to issues with bills, faulty products or shipping errors.

8. What do you mean by human resource?

All the employees that work in an organisation as various teams are called human resource. It is generally the largest resource of all in the company. HR is managed by a dedicated HR department in larger corporations.

9. How customer service is important for business?

Customer service helps to secure new clients and promotes referrals from your existing clients. Customer-service departments, unlike front-line staff, provide existing customers with a direct contact that offers solutions to issues with bills, faulty products or shipping errors.

10. What do you mean by sales and marketing?

Sales is the heart of all businesses. It is done by a dedicated sales team that develops prospects into clients, performs demonstrations and maintains contact with existing client base.

Marketing promotes the business. Very few businesses can survive without marketing. In large businesses, a good marketing plan uses mass marketing via television commercials or specifically targeting clients via trade magazines.

11. What do you mean by a service and a product? Explain with an example.

Service is an intangible form of product which is given to the clients in various ways like consultancy, repairs, hospitality, schools, banks etc.

Product is a tangible entity which is manufactured and sold to the customer. It has some life span.

12. Why entrepreneurship development program required?

Entrepreneurship development programs are required to promote and support entrepreneurship. This is achieved by deploying various training programs focusing on developing entrepreneurial skills. The process of entrepreneurship development aids the entrepreneurs to develop their skills by applying what they learn in the training for improved business activities.

13. How do entrepreneurs aid in promoting nation's economy?

Entire entrepreneurship approach is focused on economic activities since all the activities are centrally focused on creation of wealth and value for organisation. All operations are planned in such a way that ensures optimum utilisation of all available resources. Since entire system works on the foundation of uncertainty and adapting to constant challenges, entrepreneurship is regarded as a dynamic force.

14. List the features of an entrepreneurship development program.

1. Clear objectives to cover for entrepreneurs' training.
2. Identifying valid and eligible prospective candidates who need training.
3. Focus on talents and markets.
4. Choosing suitable locations for training programs.
5. Meeting the skill requirements of the candidates.
6. Program impact analysis for future improvements.

15. Describe any 4 characteristics of entrepreneurship.

1. Entire entrepreneurship approach is focused on economic activities since all the activities are centrally focused on creation of wealth and value for organisation. Since entire system works on the foundation of uncertainty and adapting to constant challenges, entrepreneurship is regarded as a dynamic force.
2. Entrepreneurship has the process of looking for new, viable ideas. and improvements in the existing modes of business operations.
3. Due to constant innovations and improvements in the process entrepreneurs have more potential for further growth and return on investments.
4. Being ready to take risks and looking at them as potential opportunities is the essence of entrepreneurship.

16. How entrepreneurs benefit from taking risks in business?

Being ready to take risks and looking at them as potential opportunities is the essence of entrepreneurship. Willingness to tolerate the problems posed by risks, finding the ways to overcome them with new ideas and implement the learning in the growth of the business is the basic strategy of every entrepreneurial entity.

17. Discuss the roles of entrepreneurship in brief.

1. Entrepreneurs invest their own resources and arrange for capital and investments. The source of funding may be investors, lenders and the public. This mobilizes public wealth and benefits people as well as all stakeholders.
2. Entrepreneurs are job creators. This job creation by new businesses is very rewarding for nation's economy as it addresses problem of unemployment up to some extent.
3. Entrepreneurs set up new businesses and industrial units in less developed and backward areas. The growth

of industries and business in these areas leads to infrastructure improvements like better roads and rail links, airports, stable electricity and water supply, schools, hospitals, shopping malls and other public and private services.

4. Contribution in economic growth. India's MSME sector accounts for over 35% of the country's GDP.
5. Entrepreneurs play a key role in increasing the standard of living in a community. They create jobs and also develop and adopt innovations leading to improved quality of life of their employees, customers, and other stakeholders in the community.
6. Entrepreneurs aid in community development like education and training, healthcare, and other public services. And help build the pool of educated and skilled workers.

18. List any 6 rewards of entrepreneurship.

1. Entrepreneurs are the captain of their business with full independence.
2. Flexible schedules and processes.
3. Do what you believe.
4. Lead enthusiastic teams
5. Stay creative and productive.
6. Recognition and fame.

19. How do entrepreneurs contribute to industrial and social development?

Entrepreneurs give to society. Entrepreneurs often do more for the greater good than the average person. They make honest money with great struggle and pay for taxes and public services thereby contributing and returning to the economy. Many of them take green initiatives for environment and contribute to the charities for social causes.

Entrepreneurship, in its core, has the process of looking for new, viable ideas. Working environment of an entrepreneur entity encourages regular reviews and analyses of the processes and their outcomes. Such constant evaluations lead to the birth of innovative ideas and improvements in the existing modes of business operations.

20. How can you say that entrepreneurs are innovative and independent?

Entrepreneurship, in its core, has the process of looking for new, viable ideas. Working environment of an entrepreneur entity encourages regular reviews and analyses of the processes and their outcomes. Such constant evaluations lead to the birth of innovative ideas and improvements in the existing modes of business operations.

Despite responsibilities there is greater independence since entrepreneurship invites abilities to work independently yet in coordination with flexible decision-making system.

Test Your Knowledge

- | | | | | | |
|------|------|------|-------|-------|-------|
| 1. C | 2. C | 3. B | 4. C | 5. B | 6. D |
| 7. D | 8. D | 9. B | 10. C | 11. D | 12. D |

Unit 5: Green Skills-I

SESSION 1: Environment, Natural Resources and Conservation

Exercise

1. Define the terms environment and ecosystem.

Our environment is everything that surrounds us- from the trees, mountains, roads, buildings, things and even people. It is a combination of both natural and human-made elements.

Community of living and non-living organisms living interdependently with each other is called ecosystem. like, Forest, Pond etc. An ecosystem is a dynamic entity with constant interactions occurring among the organisms and with the surroundings.

2. How does pollution affect environment?

The contamination of the surrounding environment by the addition of foreign/unwanted substances is known as pollution.

Air Pollution is posing a serious threat to both flora and fauna. Air pollution is believed to end lives of over 20 lakh people every year. Incurable respiratory diseases among animals, aorist rainfall, acid rain, global warming, depletion of ozone layer, the rise in temperature, withering of plants, drought-like conditions, the grimy appearance of buildings etc. are only because of air pollution.

Because of pollution and misuse of resources water table has already depleted from its normal level and the water which is available is again impure from which can cause serious diseases like cholera, diarrhoea, typhoid, retarded growth and stomach/peptic ulcers etc.

3. What are the ill effects of deforestation and global warming?

Deforestation is when humans remove or clear large areas of forest lands and related ecosystems for non-forest use. In these cases, trees are never re-planted. Since the industrial age, about half of world's original forests have been destroyed and millions of animals and living things have been endangered.

Removal of green cover and excessive industrialisation increases global warming due to ozone layer depletion and UV rays entering earth's atmosphere. Increase in Carbon dioxide and chlorofluorocarbons increase earth's temperature leading to global warming.

4. How can we prevent ill effect of man's actions on environment?

Human greed, heavy industrialisation, rampant over exploitation of natural resources has brought humans and environment to the brink of destruction. The Green Economy is an alternative vision for growth and development and sustainable development. Green Economy can promote safer economic, environmental and social well-being. Green economy addresses low carbon emissions, efficient use of resources, and social benefits.

SESSION 2: Green Economy

Exercise

1. What do you mean by green economy? Explain briefly.

The Green Economy is an alternative vision for growth and development and sustainable development. Green Economy can promote safer economic, environmental and social well-being. Green economy addresses low carbon emissions, efficient use of resources, and social benefits. Green economy improves social well-being, equity and reduces environmental risks. It is a viable alternative to today's economic structures, which encourage waste and threats to the environment. The concept of the green economy is emerging as a priority for government for sustainable and environment-friendly growth.

2. Describe the importance of green economy in the modern world in brief.

Green economy addresses low carbon emissions, efficient use of resources, and social benefits. Better and steady growth in income, proper employment opportunities and related activities need to be more public oriented and prevent the damage to biodiversity and ecosystem.

Improved energy security and environmental and public health have greater scope to implement green initiatives. This is a priority for government for sustainable and environment friendly economy.

3. List the steps we can deploy to achieve green economy.

Will power and commitment of the government.

Laws and legal framework.

Green policies.

Support renewable technology.

Innovations in energy sector.

4. How green policies and political commitments achieve green economy?

Policy makers should put proper mechanisms in place to prevent natural resource abuse. Secondly, government bodies need to promote funding for entrepreneurs that provide innovative solutions to energy issues. Government needs to promote green investment and research. Political bodies of government should commit to the green growth path for economy. This could include better research and development, resorting to innovative renewable technologies and renewable energies.

Assessment

1. What do you mean by environment?

Environment is a combination of both natural and human-made elements. These elements are divided into two types: Biotic and Abiotic. Biotic elements are all the living organisms. Abiotic elements include all the non-living things. Land, air, water, plants and animals all comprise the natural environment.

2. Which components is our environment made of?

Our environment is mainly made of the lithosphere - the hard top layer of the earth, the Hydrosphere — various sources of water and different types of water bodies, the atmosphere — the thin layer of air that surrounds the earth and the biosphere that includes all life.

3. What is Ecosystem?

Community of living and non-living organisms living interdependently with each other is called ecosystem. Like, Forest, Pond etc. An ecosystem is a dynamic entity with constant interactions occurring among the organisms and with the surroundings.

4. Give an example of an ecosystem and briefly explain it.

In a river, members of ecosystem are fish, aquatic plants, insects, insect eating birds, amphibians like frog, microorganisms of soil and water etc. Fish and water animals release carbon dioxide used by aquatic plants and plants release oxygen for animals to absorb.

5. List any 5 disastrous effects on environment caused by human activities.

1. Rapid endangerment of rare animals and plants species due to extensive poaching.
2. Greater demand for precious animal parts and ornamental goods made from them.
3. Erosion of soil and deterioration of soil fertility.
4. Water pollution due to fertilisers, pesticides, domestic and industrial waste.
5. Air pollution due to toxic industrial emission and fuel combustion.

6. What do you mean by deforestation? What are its causes and effects?

Deforestation is when humans remove or clear large areas of forest lands and related ecosystems for non-forest use. These include clearing for farming purposes, ranching and urban use. In these cases, trees are never re-planted. About half of the world's original forests have been destroyed so far and millions of animals and living things have been endangered.

Causes:

- Trees are cut down (deforestation) for many reasons including
- To be used, sold or exported as timber, wood or fuel (charcoal). This is called logging.
- To be used for farming purposes (grazing fields for livestock, or large-scale farming activities)
- To make room for human settlement and urbanization (these include making space for shelter, industries, and roads)
- To make room for mining.

Effects:

- Global warming.
- Irregular rains.
- Floods
- Soil erosion.
- Draught.

7. What are the effects of air pollution and possible solutions?

Air Pollution is a serious threat to both flora and fauna. Respiratory diseases among animals, acid rain, global warming, depletion of ozone layer, the rise in temperature, drought-like conditions, etc. are because of air pollution.

If the rate at which pollution is increasing right now continues then soon quality air for breathing will cease to exist and the whole ecosystem will be disturbed.

Solution: The industries should be set up far from residential areas and proper filters should be used to check out toxic emissions from the industries. Deforestation should be stopped and afforestation should be promoted. Power Plants emissions should be controlled. Migrating towards cleaner sources of energy like solar and wind energy.

8. What are the effects of water pollution and possible solutions?

If the misuse of water is not stopped then pure drinking water won't be available for consumption. Due to misuse of water, water table has already depleted from its normal level and the water which is available is impure from which can cause serious diseases like cholera, diarrhoea, typhoid, retarded growth and stomach/peptic ulcers etc.

Solution: The domestic and sewage water should be recycled by correctly mixing it with soil which increases the fertility of the soil. The industrial toxic waste, on the other hand, should not be disposed of directly in the water bodies at all. Alternative disposable techniques should be developed or should be disposed of after proper treatment. The use of pesticides and insecticides should be minimized.

9. What is global warming?

Global warming occurs when carbon dioxide (CO₂) and other air pollutants and greenhouse gases collect in the atmosphere and absorb sunlight and solar radiation that have bounced off the earth's surface. Ozone layer depletion is done by Chloro-fluoro-carbons. Extreme heat waves, melting of glaciers, and severe droughts cause water shortages and increase the risk of wildfires.

Rising sea levels will cause flooding in coastal areas. Forests, farms, and cities face heat waves, heavy downpours and floods. All these damage and destroy agriculture and fisheries. Diseases like allergies, asthma and infections outbreaks are becoming more common.

10. How have human activities endangered animal species?

Humans are largely responsible when animals become extinct, endangered or threatened. Humans destroy precious habitat—the natural environment of a living thing—when they fill swamps and marshes, dam rivers and cut down trees to build homes, roads and other developments. Oil spills, acid rain and water pollution have been devastating for many species of fish and birds. Humans have over hunted and over harvested species, leading to their endangerment, and often, extinction. Habitat loss due to forest fires, deforestation, pollution, over killing and poaching has led to the extinction of rare animal species.

11. Name a few endangered species.

Some endangered species are: giant panda, tiger, whooping crane, blue whale, Asian elephant, sea otter, snow leopard and gorilla.

12. How is radioactive waste and Electronic waste dangerous for environment?

Radioactive waste is nuclear fuel that is produced after being used inside of a nuclear reactor. This is very dangerous and remains this way for thousands of years. It must be handled in the right manner. Industries like mining, defence, medicine, scientific research, nuclear power generation which produce by-products that include radioactive waste. Electronic wastes include discarded electronic devices like old cell phones, computers, batteries etc. They degenerate very slow and are hazardous.

13. What do you understand by the concept of green economy?

Human greed, heavy industrialisation, over exploitation of natural resources has brought the humans and environment to the brink of destruction. Green Economy is an alternative vision for growth and development. Green Economy promotes safer economic, environmental and social well-being. Green economy addresses low carbon emissions, efficient use of resources, and social benefits. It improves social well-being, equity and reduces environmental risks.

14. Which problems does green economy address?

Green Economy can promote safer economic, environmental and social well-being. An inclusive green economy improves social well-being, equity and reduces environmental risks. It is a viable alternative to today's dominant economic structures, which encourages waste, causes resource scarcities, and which are threats to the environment.

15. Explain briefly how we can achieve green economy?

Certain general steps that can be taken to achieve green economy are:

Political commitment: Government bodies should commit to the green growth path for economy. This could include better research and development, resorting to innovative renewable technologies in industry.

Legal and regulatory framework: Policies for green regulatory systems to prevent climate change. Laws must be enforced with heavy hand to eliminate the damages to environment.

Green policies: Policy makers should introduce mechanisms to prevent natural resource abuse. Government needs to promote funding for entrepreneurs that provide innovative solutions to energy issues. Government needs to promote and support green efforts in private industry.

Technology viability: Use public funds to support renewable technology.

Institutional setup: Institutional adjustments to adopt innovative solutions and attract new investments for clean energy, biogas, windmills etc.

Test Your Knowledge

- | | | | | | |
|------|------|------|-------|------|------|
| 1. A | 2. B | 3. B | 4. D | 5. D | 6. A |
| 7. D | 8. C | 9. C | 10. B | | |

Subject-specific Skills

Unit 1: Introduction to IT-ITeS Industry

SESSION 1: Introduction

Exercise

1. What is Information Technology? How does it help in enabling various business services?

Information Technology (IT) encompasses 4 basic operations:

1. Creating information
2. Managing information
3. Storing information

4. Exchanging information.

IT includes all types of technology used to manage information, such as computer hardware technology and various software applications used to create, store and transfer information.

IT is an integral part of almost all modern businesses. Modern businesses run on computers, networks, communication technology and information systems are essential parts of every business today. Every business, large, medium or small, needs to invest in technology to compete. IT brings a variety of benefits to a business, like automating most business operations, enhancing the customer relations, developing a business a relationship with potential customers. This helps in reducing costs, improving efficiency, maximising profit, minimising waste, providing better service to customers, supporting better relationships with key partners, and allowing customers to better guide the business.

2. **What is BPO? List any of its 5 application areas.**

Business Process Outsourcing (BPO) services allow executing business operations through an external service provider who is not the part of the business system. BPO also comes under IT services as IT plays a very useful role in optimising the business performance. The BPO industry is highly organised and hence various kinds of jobs are outsourced in India. India has proven its expertise in last many years by reducing costs with firm control on the quality of the service. Some of the BPO services are as follows:

1. Financial & Accounting Services.
2. Taxation and Insurance Services.
3. E-Publishing and web Promotion.
4. Legal Services and content Writing.
5. Multimedia & Design Services.

3. **How is BPO different from BPM?**

Business Process Outsourcing (BPO) services allow executing business operations through an external service provider who is not the part of the business system.

BPM includes multinational companies, local i.e., Indian service providers and global inhouse centers.

SESSION 2: IT Applications

Exercise

1. **How has IT influenced our daily life and work place?**

In our daily life, we use air conditioners, refrigerators, washing machines, microwave ovens and many other appliances using software. We can store and manage all the information about our important tasks, appointments, schedules and list of contacts in a computer. Computer is, therefore, playing a vital role in our lives and we cannot imagine the world without computers.

In offices, computers and software applications help in accomplishing a wide variety of tasks more effectively. In the industries, where attention to detail, speed, and efficiency are important, such as assembly-line, automation is an essential need and has become common. Web services and Office productivity applications form the basis of modern business.

2. **How do computers help in managing a library?**

Nowadays, many libraries are computerised. Each book has a bar code associated with it. This makes it easier for the library to keep track of library members, books and the availability of a specific book. Library management software is used to issue and return the book. Each book in the library has a magnetic strip attached to it that is deactivated before the book can be borrowed.

3. **Write a note on how IT has impacted the education sector positively.**

The students, teachers and educational administrators and every stakeholder in the education sector has been benefitted by integration of IT in education.

ICT in the classroom: There are many ways in which the ICT is used for education in the classroom, such as

1. E-learning classrooms with digital learning content.
2. Smart-board presentations.
3. Videos on science experiments and places difficult to reach like marine life, physiology of the body, space etc.
4. Image and video processing (creation and editing).
5. Desktop publishing of magazines and other documents.
6. Educational games and activities.
7. Computer based learning through educational disks.
8. Information search and analysis on the Internet.

Education — anywhere anytime: Any student in India can access the NCERT books online through the website www.epathshala.nic.in or mobile app. Apart from this there are a variety of websites and mobile apps to access educational resources on any topic. You can also contact a teacher/trainer via Internet to use WBT (Web-based Training). In this way education has reached the far flung areas by reaching the unreached.

Teaching aids and media: ICT is used mostly as a teaching aid in schools to:

1. Use multimedia (pictures, animations, audio-visuals) to explain topics difficult to explain.
2. Make the lessons more engaging and interesting through interactive & animated presentations.
3. Organise lessons, lesson plans, worksheets etc. using the computer.
4. Collect and organise the information relevant to the subjects.

4. Write a brief note on LMS.

Learning Management Systems (LMS) are used by several institutions to train students and enterprises to train their man power. A trainees can register themselves on the official website to access LMS and can get many services from LMS. The student can be benefited by using LMS, as it can be used to:

1. Follow lessons anytime, anywhere and by using any device.
2. Submit queries seeking clarity on any topic, getting replies, submit comments through forums.
3. Take part in the co-curricular activities via video.
4. Monitoring the progress and academic performance (usually by parents through parent login).

5. Discuss how IT has revolutionized healthcare sector.

ICT has revolutionised the health sector great deal. Patient Management Sub-System is used to maintain and manage patients' records. Hospital Management Module takes care of various activities pertaining to hospital administration. The computerised machines are used for ECG, EEG, Ultrasound and CT Scan. The variety of measuring instruments and surgical equipment are used to monitor patients' conditions during complex surgery. Expert systems help in diagnosis. Health care manufacturing companies use computers to aid the production of diagnostic tools and instruments. Laboratory and dispensaries are equipped with advanced computerised machines. They are used in scanning and diagnosing different diseases.

6. What is E-Governance? How IT has realized the vision of E-Governance?

The government makes use of advanced communication technology and large-scale computer applications in its daily operations thus encouraging G2C (Government to Customer) e-governance practices. Digital India and e-governance initiative of Government of India are best examples of this. Government and non-Governmental Organisations (NGOs). In addition to this, International Government Agencies use ICT applications to communicate and provide various services to the people and is called as e-governance. There are various official web portals of the Government of India for e-governance. There are various advantages of e-governance. The Income tax department, sales tax department, preparations of voters list, preparation of PAN card makes use of the computer system. Many government services are available online. Electricity bills can now be paid online. The government uses electronic voting for elections, by replacing the traditional voting slip and ballot box. People can enrol themselves in the electoral roll through the State Election Commission portal. Computers are common-place in modern society, and tend to make previously laborious manual tasks of data entry much simpler and quicker.

Assessment

A. Select the correct option. – 1 Mark each.

- | | | | | |
|------|------|------|------|-------|
| 1. A | 2. D | 3. C | 4. D | 5. A |
| 6. A | 7. C | 8. A | 9. A | 10. B |

B. Answer the following questions. – 2 Marks each.

1. What is the basic difference between IT and ITeS?

Information Technology (IT) facilitates faster transmission of information in various fields catering to our requirements. Based on IT is the Information Technology enabled Services (ITeS) sector which has not only changed our impression as technology people on the international front but has also contributed to our nation's economy significantly. In this session, we shall explore the fundamentals of Information Technology (IT) and IT enabled Services (ITeS).

2. Name the 4 operations that IT encompass?

Information Technology (IT) encompasses 4 basic operations:

1. Creating information
2. Managing information
3. Storing information

4. Exchanging information.

3. How is data different from information? Explain with an example.

Computers take data and instructions as input, process the data as per the instructions given and produce the meaningful results as output. This output is information. Data refers to the facts or raw material, which are processed to get the information. For example, Number of items sold, unsold and returned in a shop is factual data of the stock in that shop. We can draw various conclusions out of this data-set. This conclusion is information.

4. Explain ITeS.

Business services whose quality is improved by incorporating Information Technology in the business systems are called IT enabled Services (ITeS). ITeS is also called web-enabled services or remote services that cover the entire operations which exploit Information Technology for improving efficiency of an organisation. When business services are enabled, they provide a wide range of career options that include opportunities in all enterprises and companies. ITeS is defined as outsourcing of processes that can be enabled with information technology and covers diverse areas like finance, HR, administration, health care, telecommunication, manufacturing, etc.

C. Answer the following questions. – 3 Marks each.

1. What are BPO services? How are they different from BPM?

Business Process Outsourcing (BPO) services allow executing business operations through an external service provider who is not the part of the business system. BPO also comes under IT services as IT plays a very useful role in optimising the business performance. The BPO industry is highly organised and hence various kinds of jobs are outsourced in India. India has proven its expertise in last many years by reducing costs with firm control on the quality of the service.

BPO services are executed through an external service provider who is not the part of the business system while BPM includes multinational companies, local ie Indian service providers and global inhouse centers.

2. What do you mean by LMS?

Learning Management System is a software or a web service that is used to create learning material, courses and training content for various learners. It also allows the enrolment of students and empanelment of teachers or instructors. LMS is used to manage courses, learners, trainers and the data related to them such as course details and schedules, learners' performance in various assignments, tests and exams and registration and management of trainers. In this era of information, LMSs have become standard tool to provide online training to the learners. The benefits of LMS include centralised management of all the details related to courses, learners and trainers. This way, it is very economical. Today, LMSs run on online platforms called cloud and can be accessed anytime, anywhere.

3. Discuss the advantages of BPO services.

BPO Service Industry is doing exceptionally well in India because of the following advantages:

1. BPO service providers in India invest in hi-tech hardware and software to deliver the best of services. They follow quality checks to ensure error free and exceptional service.
2. Government of India is encouraging BPO Industry in India by providing necessary infrastructure and logistical support.
3. BPO Industry in India is highly developed and capable of delivering numerous types of BPO services in exceptional quality.

4. What is a BPM industry?

The organisations within the IT-BPM industry includes Multinational Companies which have their headquarters outside India but operate in multiple locations worldwide, Indian Service Providers who have their headquarters in India while having offices at many international locations and Global In-house Centers who cater to the needs of their parent company only and do not serve external clients.

5. What is the role of IT in education?

Computers and Information Technology are extensively used in education for teaching-learning and assessment. The software and hardware technology are used for creation and transmission of information in various forms including still pictures, audio, video and animation to the learners. The learning becomes easier and accessible through IT. A lot of teaching resources are available for teachers to teach in a better way. Online assessment helps to assess the students without any bias. The students, teachers and educational administrators and every stakeholder in the education sector has been benefitted by integration of IT in education.

6. Briefly discuss the role of IT in medical field.

ICT has revolutionised the health sector great deal. Patient Management Sub-System is used to maintain and manage patients' records. Hospital Management Module takes care if various activities pertaining to hospital

administration. The computerised machines are used for ECG, EEG, Ultrasound and CT Scan. The variety of measuring instruments and surgical equipment are used to monitor patients' conditions during complex surgery. With the advancement in computer hardware and software technology, various high-tech machines are used in the diagnosis and treatment of critical diseases. Using expert system, diseases can be diagnosed at the early stages and the patients can be given treatment accordingly. Some of these machines are:

Computerised axial tomography Machine (CAT)

ECG—Electrocardiogram Machine

EEG (Electro-encephalography)

Blood Sugar Testing Machine

Blood Pressure Measuring Machine

7. How IT has been useful in Government and Public Services?

IT and ITeS has enabled the government to run most of its functions and operations using advanced ICT tools. Such a government is called eGovernment and the mode is called eGovernance. Government uses advanced ICT tools to serve the common people. Digitalisation of government platforms and websites is an example of this. This model helps in reaching the unreached in remote areas easily and serve them better. The middle-men are removed and service becomes more transparent and quicker. People can easily access and avail almost all the public services today in online mode using their mobile devices and computers. Bills are paid online. Money transfers occur directly into the bank accounts of the beneficiaries from the government accounts. This minimises corrupt practices and empowers people.

D. Answer the following questions. – 5 Marks each.

1. Discuss IT applications in certain major areas.

IT in education

Computers and Information Technology are extensively used in education for teaching-learning and assessment. The software and hardware technology is used for creation and transmission of information in various forms including still pictures, audio, video and animation to the learners. The learning becomes easier and accessible through IT. A lot of teaching resources are available for teachers to teach in a better way. Online assessment helps to assess the students without any bias. The students, teachers and educational administrators and every stakeholder in the education sector has been benefitted by integration of IT in education.

IT in communication

Communication is used to convey messages and ideas, pictures, or speeches. A person who receives this must understand clearly and correctly. Modern communication makes use of computer system, handheld devices and communication network. We use computers for email, chatting, FTP, telnet and video conferencing.

IT in banking

Modern banking systems run on computers. Every activity of bank is now online. The customer's data and transactions are recorded by computers. Recurring deposits (e-RD), Fixed deposits (e-FD), money transfers (NEFT, RTGS), etc, are done using Internet. Capital market transactions, financial analysis and related services are available in online platforms. Bank customers use Automated Teller Machines (ATM) for cash deposits and withdrawal, or to view current balance.

2. How is LMS different from traditional way of training and learning?

Learning Management Systems (LMS) are used by several institutions to train students and enterprises to train their man power. LMS is different from traditional learning system in that, uses can:

1. Follow lessons anytime, anywhere and by using any device.
2. Submit queries seeking clarity on any topic, getting replies, submit comments through forums.
3. Take part in the co-curricular activities via video.
4. Monitoring the progress and academic performance (usually by parents through parent login).

3. How do businesses and banks harness the power of IT?

IT in business

Computers are used in various business enterprises for various operations such as payroll calculations, preparing budgeting, sales analysis, financial forecasting, managing inventory and maintaining stocks. Transactions are done through the internet (e-commerce). IT facilitates marketing, customer visit, product browsing, shopping basket checkout, tax and shopping, receipt and process order. E-commerce offers services pertaining to processing inventory management, transactions, documentation, presentations, and gathering product information. Smart cards, such as credit cards and debit cards are used in shops. These cards have a metallic strip on which the user's

Personal Identification Number (PIN), and account number is stored and can be read when it is passed through a special reader. Airlines use large-scale computer applications for their reservations system, both in the airports and in central reservations call-centers. Other businesses that have large-scale computing requirements are insurance claims systems and online banking, which both have large numbers of users and operators interacting across a sophisticated system.

IT in banking

Modern banking systems run on computers. Every activity of bank is now online. The customer's data and transactions are recorded by computers. Recurring deposits (e-RD), Fixed deposits (e-FD), money transfers (NEFT, RTGS), etc., are done using Internet. Capital market transactions, financial analysis and related services are available in online platforms. Bank customers use Automated Teller Machines (ATM) for cash deposits and withdrawal, or to view current balance.

4. Discuss the role of government in serving the masses using IT.

The government makes use of advanced communication technology and large-scale computer applications in its daily operations thus encouraging G2C (Government to Customer) e-governance practices. Digital India and e-governance initiative of Government of India are best examples of this. Government and non-Governmental Organisations (NGOs). In addition to this, International Government Agencies use ICT applications to communicate and provide various services to the people and is called as e-governance. There are various official web portals of the Government of India for e-governance. There are various advantages of e-governance. The Income tax department, sales tax department, preparations of voters list, preparation of PAN card makes use of the computer system. Many government services are available online. Electricity bills can now be paid online. The government uses electronic voting for elections, by replacing the traditional voting slip and ballot box. People can enrol themselves in the electoral roll through the State Election Commission portal. Computers are common-place in modern society, and tend to make previously laborious manual tasks of data entry much simpler and quicker.

5. Write a note on IT applications in general in our daily lives.

If we look around, we can observe the use of computer and Information Technology in various areas such as homes, workplaces, in the modern service industries and in many other aspects our life. Personally, we use IT for entertainment or amusement like listening to music, watching videos, playing games, doing office work and assignments, video chatting and exchanging messages, managing daily plans, reading online books, paying utility bills, booking ticket for traveling, hotels, shows, conducting bank operations, etc. The various application areas are business, banking, insurance, education, marketing, health care, engineering design, military, communication, animation, research, agriculture and government.

A personal computer (PC) or a laptop is used to work at home along with entertainment such as to do household accounts, play games, surf the web, use e-mail, create music, and pursue a range of other hobbies. They are also used to play games. It includes action games, role playing games, puzzles and many more. A PC with a CDRom drive, sound card, and speakers can play audio CD. A computer can be used from home to study a wide range of online training courses. Computers and digital devices are now used for online shopping and e-commerce.

In our daily life, we use air conditioners, refrigerators, washing machines, microwave ovens and many other appliances using software. We can store and manage all the information about our important tasks, appointments, schedules and list of contacts in a computer. Computer is, therefore, playing a vital role in our lives and we cannot imagine the world without computers.

Unit 2: Data Entry & Keyboarding Skills

SESSION 1-5

Assessment

1. Describe the function of any three keys of a keyboard under following categories.

- Punctuation keys: Used to type punctuation marks. E.g., colon (:), single quotes and double quotes.
- Special keys: They perform some useful operations either alone or in combination with other keys. E.g., Escape key is used to close or exit any pop-up or dialog box, Shift key is used to type alphabets in upper case, Ctrl key is used in combination with letter B to make text bold.
- Navigation keys: These keys are used to move across a document. E.g., arrow keys to move cursor in corresponding four directions, page up and page down to scroll one page up or down, home and end keys to bring the cursor to the beginning and end of the line respectively.

- d. Command keys: Delete, backspace and insert keys are command keys used to remove text and insert the text.
- e. Function keys: These are 12 keys F1 to f12 for certain specific functions such as F2 is mostly used to edit text, F1 displays help, F5 runs programs in program editors or runs show in a presentation software.

2. What are the uses of mouse buttons and its scroll wheel?

Left mouse button: Single click of this button is used to select items. Double click opens files or runs programs. (Triple click selects whole paragraph.). Using left button, we can also click an item to grab it and then move the mouse to move the item and finally release the button to drop the item. This is called drag-drop.

Right mouse button: Its click displays shortcut menus or pop-up menus.

Scroll wheel: This wheel helps user scroll vertically (roll the wheel up and down) or horizontally (press the wheel and move the mouse sideways) through the document.

Test Your Knowledge

1. D 2. B 3. A 4. A 5. B 6. C 7. C 8. B

SESSION 6 -10

All Exercises are practical oriented.

Unit 3: Digital Documentation

SESSION 1-17

All Exercises are practical oriented.

Assessment

A. Select the correct option. – 1 Marks each.

- | | | | | | |
|-------|-------|-------|-------|-------|-------|
| 1. C | 2. D | 3. B | 4. C | 5. D | 6. B |
| 7. B | 8. A | 9. D | 10. A | 11. D | 12. B |
| 13. B | 14. A | 15. A | 16. C | 17. B | 18. C |
| 19. C | 20. A | 21. B | 22. A | | |

B. Answer the following questions. – 2 Marks each.

1. List any two major features of a word processor.

1. Create and edit various types of documents such as letters, brochures, newsletters, resume etc.
2. Check and correct spellings and grammar.

2. List 4 examples of popular word processors.

Microsoft Word, LibreOffice Writer, Google Docs, OpenOffice Writer, WordPerfect, Apple Pages.

3. What do you mean by WYSIWYG?

WYSIWYG refers to Wat You See Is What You Get. This is the feature of all the modern word processing software in which user sees the exact view of the document as it will be visible on taking its printout in real in terms of colour, layout, font sizes and formatting etc.

4. What is the major difference between Normal View and Web View?

Normal view allows document editing and shows all the parts of a page such as the rulers, page margins, header footers and page numbers etc. In Web view, the document is treated is a single flow of text. There are no page numbers, headers and footers and sections etc.

5. What is the use of Navigator?

Navigator window helps in switching easily and quickly between various parts of a document such tables, drawing object, links etc. It is useful while working with large documents.

6. What is the difference between deleting the text using Delete key and Backspace key?

Pressing Delete key erases the letters of the text on the right side of the cursor while pressing Backspace key removes the text to the left side of the cursor.

7. Rajeev has typed a multipage story in which he wants to replace all the occurrences of the word “Calcutta” to “Kolkata”. But he does not want to replace uppercase CALCUTTA anywhere in the document. Help Rajeev.

Edit menu > Find and Replace option > In the dialog box, check Match case checkbox > Replace All button.

8. **Suman has a multipage project report in which she needs to replace the words “the” with “The”. But she does not want that the string “the” anywhere in “these” should change. What should she do to do this?**
Edit menu > Find and Replace option > In the dialog box, check Whole words only checkbox > Replace All button.
9. **What is the significance of spell check and thesaurus features?**
Spell check feature helps in finding and correcting spelling errors while thesaurus feature helps in finding out the synonyms and antonyms of the selected words to replace them with suitable one.
10. **How will you set the page margins, size, orientation and border of a page?**
Format menu > Page Style option > In Page Style dialog box, go to Page tab and set the page margins, size and orientation of the page. In Borders tab, apply the settings for the page border.
11. **How is justified text different from center aligned text?**
Justified text spreads evenly along the left and right margins of the page over the full width of the page. Center aligned text is placed at and is spread out from the exact center of the left and right margin.
12. **Veena is drafting computer lab rules. She can make the bullet list or numbered list but which should be more suitable? Justify your answer.**
Since, lab rules are not sequential steps to be followed, a bullet list is suitable enough.
13. **Anu is writing the steps to assemble a computer. She can make the bullet list or numbered list but which should be more suitable? Justify your answer.**
The steps to assemble a computer need to be followed in a proper sequence hence a numbered list shall be most suitable.
14. **Name any 4 types of document styles.**
Paragraph, Character, Frame, Page.
15. **Why do we need to divide a document into sections?**
It is easier to manage a larger document by dividing it into various sections. For example, a book can be divided into sections of each chapter. This way each section can be edited as separate unit and can have its own header footers and page numbers etc.
16. **Briefly explain various text cases in a word processor.**
Uppercase – All the letters are in capital case. E.g., HELLO.
Lowercase – All the letters are in capital case. E.g., hello.
Toggle Case – On changing the case, capital letters turn into lowercase and vice versa. E.g., hELlo > HeLLo.
Sentence Case – First letter of the first word is in uppercase only. E.g., He is eating food.
Capitalize Each Word – First letter of each word is in uppercase. E.g., He Is Eating Food.
Cycle Case – On clicking on this option repeatedly, the cases change consecutively.
17. **What is the significance of headers and footers?**
Headers and footers are used to keep the content which needs to be displayed on each page of a document such as page numbers, titles, company logo, repeated headings etc. We can decide for a different content in header/footer on alternate pages. We can also set different content for the header/footer of first page since usually, first page is cover page of the document.
18. **Ravi has a 100 pages document. He needs to print the pages from 5 to 10, page number 55, 81 and pages from 90 to 96 in landscape orientation. Help him in doing this.**
Ravi will go to File menu > Print option. In the Print dialog box, he will select Pages option button and mention 5-10, 55, 81, 90-96 in the text box. Then, he will choose Landscape orientation in Orientation drop-down. Finally, he will click on Print button.
19. **What do you mean by mail merge? What is the role of a data source in mail merge?**
Mail merge feature allows to generate copies of documents such as letters or invitations for each of the recipients with same content and varying details like recipient's name, address etc. Data source is the document that stores all the varying details (data) that need to be merged with the main document. When these details are merged with the main document, the copies merged documents are created.
20. **What is the advantage of mail merge?**
Mail merge feature allows to generate copies of documents such as letters or invitations for each of the recipients with same content and varying details like recipient's name, address etc. This way, copies of main document are generated for each recipient automatically. This faster way saves a lot of time and effort.

C. Answer the following questions. – 3 Marks each.

1. List any 5 features of a word processor.

1. Format and edit document by applying various styles and formatting options.
2. Headers and Footers to keep repeating information such as page numbers, titles, logos on each page.
3. Printing the document with various settings and orientations.
4. Inserting shapes and images to enhance the documents.
5. Mail merge feature to generate multiple common documents for various recipients.

2. Discuss full screen and zoom view of a document.

In Full screen view (View menu > Full screen), document covers the whole computer screen and other interface components are hidden. It is useful in reviewing the content of the document. View menu and Status bar also provide various zoom options to view the document in various enlargements. It is also comfortable for people with lower eye sight.

3. What is the significance of Undo feature?

While drafting and designing a document we tend to perform any undesired action on the document. Such unwanted actions can be rolled back or cancelled by using Undo feature. Pressing Ctrl + Z undoes the last action performed. This feature saves time from doing frequent corrections due to applying undesired action on the document. Undo feature has multiple levels of undoing that means every time you Undo, the consecutive previous actions will be cancelled.

4. What is the advantage of headers and footers? How will you set a different header for the first page?

In a multi-page document, there is some information which formally needs to be displayed on every page such as report titles, chapter headings, page numbers, logo image, section headings. These details can be displayed in the header or footer region of the document. When such details are kept in the header or footer section a document then they appear automatically on each page of the document. To set different header for the first page – at the partition of a page, in header drop-down, select Format Header option or Format menu > Page Style > Header. In Page Style dialog box, go to Header tab and unselect 'Same content on first page' checkbox.

5. What do you mean by indent and spacing in a document?

Line spacing is the distance between the two adjacent lines. Paragraph spacing is the distance between the two consecutive paragraphs. Indentation means shifting the text slightly towards right side. These settings can be done in 'Indent & Spacing' tab in Paragraph dialog box under Format menu > Paragraph option.

6. Discuss different tabs in a word processor.

When we press Tab key on the keyboard, the text shifts by a few spaces by default. This can be changed by setting tab stop positions by going to Format menu > Paragraph option > Paragraph dialog box > Tabs tab. We can select various tabs such as Left, Right, Centered, and tabs for Decimal places. For each tab we can set the Position in Cms. Tab stops can also be set by clicking at desired points over the Ruler at the top of the page.

7. What is the use of document styles? List various document styles.

Document styles are predefined formatting of the content which can be applied on the new text. Users can also define their own styles from the text formatted by them. Having styles is very useful for larger documents which have various sections with different standard formatting. Styles provide a consistent look to the document and make it look more professional. Various types of styles are Paragraph, Character, Frame, Page, List and Table styles.

8. Give two examples of multi-column documents. Ravi wants to create a two-page document but he needs second page with two columns while first page with only single column. How will he do this?

A variety of documents such as magazines, journals, newspapers and articles have text laid out across multiple columns on the page. For the document with 2 pages and different number of columns, Ravi can divide the document into different sections. Then, the page in first section can be kept single columns and second page (in second section) can be divided into 2 columns (Format menu > Columns option > Columns dialog box).

9. Discuss the different ways in which text can be wrapped around an image or a shape.

Text can be wrapped around an image or a shape in various ways such as simply around it (parallel), if there is less than 2 cm spacing between the text and the image then text is not placed beside the image (optimal), the text can be placed before or after the image and behind the images also.

10. Explain the terms - Main document, data source, merged fields, merged document.

Main document contains the main text or content of the letter which should go in all the copies of mail, data source contains the details or data which should be merged with main document through merged fields inserted in required places. Usually, number of records merges equals number of copies of the letter created later. Merged documents are the copies of the main document with variable information coming from data source such as name, address, city etc.

D. Answer the following questions. – 5 Marks each.

1. What is a word processor? Briefly discuss any 4 features of a word processor.

An application software that allows us to create various documents is called a word processor. Using it we can create a variety of documents such as letters, reports, resumes, invitations, visiting cards, tabular reports etc. We can edit and format the document in various ways and enhance with images, shapes and styles. Some features of a word processor are:

1. Mail merge: This feature allows to generate multiple documents automatically for multiple recipients faster and easy.
2. Styles and templates: Various document styles can be used to apply consistent formatting on the document. iTemplates are pre-designed documents which can be modified as per our requirements.
3. Spell check and Thesaurus: Document can be reviewed to find and correct spellings as well as in-built dictionary provides synonyms and antonyms in the form a thesaurus.
4. Add useful repeating information on headers. We can also place page numbers in headers or footers.

2. Explain the use of spell check and Thesaurus.

Spelling mistakes are natural while drafting a document. A red wavy line appears below the misspelt word. User can right click on such word and select the suitable correct spellings suggested in the context menu that appears. Alternatively, we can select Spelling option in Tools menu. The Spelling dialog box, displays the next misspelt word and suggests correct spellings. User has the choice to ignore or apply correct spellings. User can insert a newly found word into the program dictionary. The Tools > Thesaurus option allows applying various synonyms of the words.

3. Briefly discuss major page styling options of a word processor.

Page styling is related to the page not the text. Format menu > Page Style option opens the Page Style dialog box in which we can apply various page styling options. In Page tab, the page size, orientation margins and page number styles can be set. Area tab allows to apply various colour, gradient, patterns etc on the page in different styles. Transparency tab sets the page transparency. Header tab and Footer tab provide headers and footers settings like different footers on first page etc., height, margins etc. Borders tab allows applying page border styles, colours, width etc., Columns tab allows setting multiple column settings. Footnote tab allows setting footnote options like colour, thickness etc.

4. Write a note on how will you use various styling options of a word processor.

A library of pre-defined styles is available in Writer. For various components of the document, there are different style types such as Paragraph style, Character, Frame, Page, List and Table styles. Various style options can be used as follows:

New Style from Selection: This option in Formatting toolbar allows the user to create new style from their own pre-formatted text and save that style with a unique name.

Update Selected Style: This option in Formatting toolbar allows you to modify an existing style. Modification can be saved and used later.

Loading Predesigned Styles: In Styles menu, select Load Styles option to bring up Load Styles dialog box in which various style templates are available under various categories to choose from.

5. How will you apply basic formatting on a shape (line and fill)?

Shapes can be inserted by selecting various shapes arranged in categories in Insert > Shape menu or in Drawing toolbar. After inserting a shape, we can select it for formatting. In the Sidebar, various properties of the selected shape are displayed in the Properties panel. In this panel, Line section, select various line styles, line width, colours and transparency options for the selected shape. Under Area section, various Fill colours and patterns can be chosen to fill along with transparency setting.

6. What do you mean by rotating, cropping and resizing an image?

Rotating an image means turning around the image by some degree on the axis of the image. This is done by selecting the image and clicking Rotate button on the Drawing Object Toolbar, grabbing the tiny handles on the selection corners of the image by the help of mouse and rotating while mouse left is clicked.

Cropping means, removing the unwanted area of an image starting from its outer edges. This is done by selecting the image and clicking Crop Image button on the Drawing Object Toolbar. 8 handles appear around it which can be grabbed with left mouse button and dragged inwards to crop the image.

A selected image can simply be resized into larger or smaller size by grabbing its selection handles with mouse and dragging.

7. Discuss various text wrapping options around an image.

Various text wrapping options for image and shapes are:

1. None: no text wrapping and text remain above and below the object.
2. Parallel: The text flows around the object.
3. Optimal: Prevents text wrapping if spacing between the text and image is less than 2 cms.
4. Before: The text appears to the left side of the image or object.
5. After: The text appears to the right side of the image or object.
6. Through: The object flows over the text.

8. Briefly discuss printing features of a word processor.

Printing features involves 2 aspects – i. Printer setup and ii. Printing

In Printer Setup, we do the settings of Printer properties such as which is the default printer if there are multiple printers installed. The other default settings of a printer can be done based on your frequent requirements like page size, type of paper, print quality, colour modes (black and white or coloured), which sides of pages to print, which part of content to print etc.

In printing, we can preview before actually printing the document to ensure that page is ready as we need. In print preview, we can setup following properties:

Printer: Select the target printer in case multiple printers are installed.

Range and copies: Specify which pages to print like All pages, selective pages such as 1-5 means print pages 1 to 5 and number of copies to print.

Page Layout: Specify paper size, orientation (portrait/landscape) etc.

9. Taking a small example, explain the standard process of mail merge briefly.

A book store needs to send new year greetings letters to all its customers in various cities. They have the address details of all the customer. They can use mail merge feature to do this.

Prepare main document: First of all, the main greeting letter is drafted with common content. The blank spaces will be left in it to insert the name and address of the customers.

Prepare data source: The names, address, city, pin and contact number of the customers will be arranged in a table in separate document and saved by the name Customer.odt.

Setup Data Source: Go to File menu > Wizard > Address Data Source option

In the wizard, select "Other external data source" > Click Next > Settings button > Select Database Type as Writer Document > Click Next > Browse and locate Customer.odt > click Next > Give name of data source as customer > Click Finish.

Apply mail merge: Go to View menu > Toolbars > Mail Merge option. This will open Mail Merge toolbar.

Go to View menu > Data Sources option > In data explorer, open the table under your data source name and drag drop fields into your main document where you need them.

In Mail Merge toolbar, click Next Mail Merge Entry button to see the first letter. Save your merged document or print it.

Unit 4: Electronic Spreadsheet

All Exercises are practical oriented.

Assessment

A. Select the correct option. – 1 Marks each.

- | | | | | | |
|-------|-------|-------|-------|-------|-------|
| 1. C | 2. A | 3. B | 4. B | 5. A | 6. C |
| 7. D | 8. C | 9. B | 10. C | 11. C | 12. B |
| 13. B | 14. B | 15. D | 16. B | 17. B | 18. A |
| 19. C | 20. C | 21. D | 22. D | | |

B. Answer the following questions. – 2 marks each.

1. List any 2 major features of a spreadsheet program.

- Maintaining and keeping track of financial and mathematical figures and records over the time.
- Analysis of data through various tools like graphs, pivot tables and goal seeking methods.

2. **List 4 examples of popular spreadsheet program.**
OpenOffice Calc, MS Excel, Google Sheets, Apple Numbers
3. **What do you mean by a cell, active cell and cell range?**
Cross-section of a column and row is called cell. It has unique address such as B5, H10 etc. Active cell is the cell that has cursor resting on it currently, its address is visible in the address bar. Selection or mention of consecutive cell is called cell range like A1:B5 is a cell range.
4. **How are data and labels different from each other? Give example.**
Values that represent the details about an entity are called data. Calculations are done on data. Labels identify data in the form of either column heading or row heading. E.g., Age is label and 28 is data.
5. **How are cell address and cell reference related to each other?**
Cross-section of a column and row is called cell. It has unique address such as B5, H10 etc. While using a formula or function we refer to the cell by its address to access the value stored in it. This process is called cell referencing.
6. **How will you give a name to a cell range?**
Select the desired cell range > Data menu > Define Range option > In Define Database Range, specify a relevant name and click on Add button then OK the dialog box.
7. **Describe a few properties you can change in font while formatting a cell.**
Font – applies various font faces from the font dropdown.
Font size – defines the size of the text in points.
Colour – allows to select the desired colour for the text.
8. **Name any 4 operators that are used for arithmetic calculations in Calc.**
Addition (+), Subtraction (-), Multiply (*), Divide (/), Percentage (%)
9. **How will you calculate the average of values stored in 20 non-adjacent cells?**
Go to a cell and type =average(. Then, select the cells one by one with mouse while pressing Ctrl key and then type) and press Enter key.
10. **Give any 2 major differences between a formula and a function?**
 - i. A formula is defined by the user according to his/her requirement while function has a particular syntax.
 - ii. Formula is an expression composed of cell addresses, values and arithmetic operators while function usually needs arguments to process.
11. **How will you change the width of multiple adjacent columns at once?**
Click in the column head and drag to select the adjacent columns then grab the partition between the two adjacent columns with mouse and drag mouse to resize. Leave the left click, all the columns will gain same width at once.
12. **What is the advantage of fill handle?**
Fill handle (black dot at bottom-right corner of the cell cursor) helps in filling the series of numbers, months, month names etc. by filling initial values and dragging with mouse.
13. **What is the significance of Increment value in filling a series?**
Increment value determines by how much the next value should be generated. For example, if values are 1, 5 then increment value 5 is subtracting 1 from itself to get 4 which is added to 5 to generate next value i.e. 9 and so on.
14. **What do you mean by cell referencing? List its types.**
While using a formula or a function we refer to the cell by its address to access the value stored in it. This process is called cell referencing. There are 3 types of cell referencing are – relative (by default, in which cell address changes automatically if formula is copied to other cells), absolute (cell address remains fixed if formula is copied to other cells) and mixed (either row number or column remains fixed, not both).
15. **What is the role of \$ sign in cell referencing?**
In default relative referencing, the cell address in a formula or a function changes if the formula or function are copied to other cells. To stop this default action and keep the cell references fixed we use \$ sign. If \$ is put before column and row number both then entire cell address gets fixed (absolute), if \$ is put before any of these then it is mixed referencing.
16. **How is absolute referencing different from mixed referencing?**
Refer to question 15.
17. **List any 4 common chart types and their use.**
Bar or column chart – to compare values

Pie chart – to analyse distribution or percentage breakup.
 Line chart – continuous data over a period of time.
 Area chart – to see the magnitude of change over a time period.

18. What is the significance of charts?

Looking at a data set and analysing the figures is difficult as compare to presenting the same data in the graphical form of a chart. Chart is the visualisation of the data and helps in easy and quick analysis.

C. Answer the following questions – 3 marks each.

1. List any 5 features of a spreadsheet program.

- i. Performing arithmetic calculations such as financial figures, numbers and numerical values.
- ii. Visualising and analysing the data using charts.
- iii. Automatic calculations using formulas and functions.
- iv. Data checks through data validations and formatting data based on conditions called conditional formatting.
- v. Managing data using sorting, filtering and macros.

2. Briefly describe the structure of a spreadsheet.

A spreadsheet is a set of vertical columns and horizontal rows. Columns are identified by alphabet and their combinations such as first columns is denoted by A while 27th column is AA. Rows are simply numbered as 1, 2, 3 and so on. Cross-section of a column and row is called cell. It has unique address such as B5, H10 etc. Active cell shows the rectangular cursor resting on it. At the top there is formula and address bar to edit the formula and function. Each sheet in the spreadsheet program has a name at the bottom which can be changed. A set of worksheets is called workbook which is saved by a file name.

3. Explain the terms cell range, cell reference and cell address.

When we need to refer to a set of multiple adjacent cells at once then we use cell range. Selection of adjacent cells represent a cell range. In formula and function we refer to the range as starting cell: ending cell of the range. E.g., A1:C5 has 15 cells in range. While using a formula or a function we refer to the cell by its address to access the value stored in it. This process is called cell referencing. Cross-section of a column and row is called cell. It has unique address such as B5, H10 etc.

4. What are the different types of data can be stored in a worksheet?

We can store data values in different formats like numbers with decimal places or currency symbols and dates in different formats. The usual text used to describe the data as column heading or row heading is called label. For example, column heading of the cells containing marks of the students can be Marks and that of holding student names can be Names. We can also store functions and formulas in the cells for automatic calculations.

5. How is a function different from a formula?

Functions and formula both are used for automatic calculations. Functions are used on bulk or aggregate values. Formulas may contain functions in the m for calculations. A function is different from formula in following ways:

- i. Function has a unique name while formula is an expression composed of values and operators.
- ii. Functions are built-in and available in entire application software while formulas are user defined as per the requirements.
- iii. Functions take values to be processed as arguments.

6. What is a function? Explain the use of any 2 common functions.

A function is a pre-defined executable unit that performs a specific task, for example, calculating sum or average etc. Depending on the task, function has a unique relevant name such as SUM(), AVERAGE() etc. Most of the functions have a set of parentheses in which they take the cell addresses and ranges or values for processing. Two common functions are:

- i. SUM(cell addresses or cell range): It returns the sum total of the values passed to it in the form of comma separated list or a cell range. E.g., SUM(A1:A5) will return total of all the values in cells A1 to A5.
- ii. COUNT(cell addresses or cell range): It returns the sum total of the number and date values passed to it in the form of comma separated list or a cell range. E.g., COUNT(A1:A5) will return the count of all the values in cells A1 to A5.

7. Briefly explain the use of auto fill feature.

To create a sequence of values across the cells is called autofill feature. Electronic spreadsheets allow to create series of numbers or dates, month names and week names just by filling initial values and dragging the fill handle

(tiny square at the bottom right corner of the rectangular cursor of the active cell) with mouse. Numbers need two initial values to enter and then dragging them generates rest of the values. E.g., dragging 1 and 3 will give 5, 7, 9 and so on in next cell.

8. **Rajeev has a discount value in one cell. He needs to deduct this same value from the prices of 20 items using a formula. Which referencing is best suited for this and why?**

Since discount value is in one cell which has to be referred to with all 20 items while calculating the discount so the cell address of discount value needs to remain fixed. For this purpose, absolute referencing of discount value should be done. If the discount value is in cell A1 and price of the first item is in cell B1 then formula for discount of first item can go in cell C1 as B1 - \$A\$1. When we drag down this formula for other items then the cell reference A1 will remain unchanged.

9. **Discuss mixed referencing in brief.**

In certain cases, we need to just fix either row or column of the referred cells in a formula. Then such referencing is called mixed referencing.

	A	B	C	D	E	F
1			MIXY	OVEN	WASHMACH	COOLER
2			4000	10000	20000	15000
3	JAN DISCOUNT	500	=C\$2-\$B3	9500	19500	14500
4	FEB DISCOUNT	800	3200	9200	19200	14200
5	MAR DISCOUNT	1000	3000	9000	19000	14000

Here, note in the formula, only row number of item price (C\$2) and column of discount value (\$B3) are fixed.

10. **How are charts useful in comparison to plain data set?**

Looking at a data set and analysing the figures is difficult as compare to presenting the same data in the graphical form of a chart. Chart is the visualisation of the data and helps in easy and quick analysis. When we observe only a set of values in plain tabular format in a dataset of a variety of values then visually it is very challenging to derive conclusions. But, if the dataset is converted into a visual, colourful chart or graph then it is easier to compare and analyse the scenario. Hence, charts are a good tool to analyse data.

D. Answer the following questions – 5 marks each.

1. **What is a spreadsheet? Briefly discuss any 4 major features of a spreadsheet program.**

Spreadsheet is a tool to perform arithmetic calculations. Popularly known as electronic spreadsheets, they allow us to perform automatic calculations with the help of formulas and functions. They are fast, flexible and easy to maintain. 4 Major features of a spreadsheet program are:

- Automatic calculations: We can use quick and easy calculations using built-in functions and by defining our own formulas depending on the requirements.
- Charts: We can present data visualisation using variety of charts and graphs for easy and efficient analysis.
- Data analysis: Electronic spreadsheets provide several tools such as Pivot table, goal seek etc. for analysis and business planning.
- Data management: There are several tools available for managing data in different ways, such as sorting data, conditional formatting, data validation etc.

2. **Write a note on Auto fill feature by giving at least 3 distinct examples.**

Sometimes you need to enter a series of data (numbers, days, dates, etc.) then instead of typing every entry manually, FillCells feature can be used. Some of the frequently used popular series are numbers, weekdays, dates and months. A simple use is to fill serial numbers. This can be done using the fill handle. Simply type the first value in the desired cell then grab the lower right corner of the cell with left mouse click and drag down as long as you need the numbers to fill across rows.

1	Sunday	March	15 March
5	Monday	April	16-March
9	Tuesday	May	17-March
13	Wednesday	June	18-March
17	Thursday	July	19-March
21	Friday	August	20-March
25	Saturday	September	21-March
29	Sunday	October	22-March
33	Monday	November	23-March
37	Tuesday	December	24-March

There are various fill options available in Sheet menu > Fill Cells to fill series across rows and columns in either directions (up/down and left/right). After selecting the desired blank cells, you can use Fill Series option to fill values with various increments. Mention the Start value, End Value and Increment.

AutoFill option in the Fill Series dialog box helps in filling a continuous series from Starting value. Here, various series of numbers, weekdays, Months and dates are shown.

3. Giving an example, explain the difference between absolute and mixed referencing.

In absolute cell reference if formula is moved or copied to another cell, the cell addresses in the formula will not change. As shown here, the formula is $=A3-((A3*\$B\$1)/100)$. On copying this formula down to other rows, the cell reference B1 remains fixed.

In mixed cell referencing either row or columns is fixed using \$ sign, not both. Let's modify the same example with multiple discounts across columns B to F. Notice the formula in cell C6 i.e., $=\$A6-((\$A6*C\$2)/100)$. Here, columns A and row 2 are fixed. Rest of the columns and row references will change when formula will be copied to other cells. For instance, in cell E8, the formula will be $=\$A8-((\$A8*E\$2)/100)$.

	A	B
1	Discount Percent	13
2	Stock Value	Discounted Stock Value
3	1200000	$=A3-((A3*\$B\$1)/100)$
4	1540000	1540000
5	700000	700000
6	1345000	1345000
7	2000000	2000000
8	1800000	1800000
9	2900000	2900000

	A	B	C	D
1				Discount Perc
2	Stock Value	10	12	13
3	1200000	1080000	1056000	1044000
4	1540000	1386000	1355200	1339800
5	700000	630000	616000	609000
6	1345000	1210500	$=\$A6-((\$A6*C\$2)/100)$	
7	2000000	1800000	1760000	1740000

4. Why do we have absolute and mixed referencing when relative referencing works well and is so useful?

Refer to question 3.

5. How will you perform following calculations on all the values shown here?

	A	B	C	D
1	20			13
2			52	
3		12		

i. Count

ii. Average

iii. Maximum

i. Count(a1, b3,c2,d1) OR a clever trick is to take whole range count(a1:d3) to cover all values

ii. Average(a1, b3,c2,d1) OR a clever trick is to take whole range average(a1:d3) to cover all values

iii. Max(a1, b3,c2,d1) OR a clever trick is to take whole range max(a1:d3) to cover all values

6. Consider the following worksheet. The discount percentages are given in row 1 and amount is given in column A. In cell B2, calculate the amount payable after 5% discount on amount in cell A2. The formula should be copied to other cells later. The formula is: amount - ((discount percentage * amount)/100).

	A	B	C	D	E
1		5	10	15	20
2	1000	950	900	850	800
3	2000	1900	1800	1700	1600
4	5000	4750	4500	4250	4000
5	8000	7600	7200	6800	6400

$=\$A2-((\$A2*B\$1)/100)$

7. Consider the following worksheet. Cell A6 stores the sum of range A1:A5. In cell B1, calculate the difference between the value in cell A1 and the sum in cell A6. The formula in cell B1 should be copied down to other cells in column B. Then, in cell C1, calculate the square of the value in cell B1. The formula in cell C1 should be copied down to other cells in column C.

	A	B	C
1	25	-272	73984
2	32	-265	70225
3	84	-213	45369
4	65	-232	53824
5	91	-206	42436
6	297		

In cell B1: $=A1 - \$A\6

In cell C1: $=B1 * B1$

8. Briefly discuss various cell number and date formats in a spreadsheet.

Number formats: Number format has two placeholders - # and 0. Both signify single digit but # is used for fixed number of digits. If 0 is used in formatting then any blank spaces in the values are filled by extra zeroes.

For example, ##.# means two digit number with a single digit in decimal place. So, number 35.68 will be formatted as 35.6.

In the format ##.00#, a number 79.3488 will be formatted as 79.348. You can define your own format in User-defined section under Category list in the Format Cells dialog box.

For example, 0000000000.## means 10 digits before decimal places and two after decimal but for any value that has digits less than 10, zeroes will be displayed. Some other examples are:

####.# will display 3456.78 as 3456.8

#.000 will display 9.9 as 9.900

#.0# will display 13 as 13.0 and 1234.567 as 1234.57

Date format: Dates can be written in a variety of formats such as 10-Jan-2022, 10/01/2022, Jan-10-2022, 01/10/2022 etc. Click on Date category in the Format Cells dialog box select the desired format.

9. What is the significance of a chart? Briefly describe the use of any 3 distinct types of charts.

A chart is a visual representation of the data i.e., it allows us to illustrate the data graphically. Data displayed in the form of chart is easier to visualise and analyse. We can see how data values relate to each other. Thus, charts are useful in business forecasts, predictions, assessing the trends, making decisions and summarising the values graphically.

Column Chart: This chart displays the data in the form of vertical columns. It typically displays categories along the horizontal axis and values along the vertical axis. It allows to compare a single category of data between two or more items.

Line Chart: In this type of chart, data is plotted in a form of line with connecting dots. It displays categories along the horizontal axis and values along the vertical axis. It shows continuous data/data trends over a period of time.

Pie Chart: In this type of chart, data is displayed in the form of circles that shows the size of items in one data series, proportional to the sum of the items.

10. How is a pie chart different from a column chart?

A pie chart shows the distribution in proportion of other values in the form of percentage or values or both. The purpose of pie chart is to analyse the distribution of values for example, what is the percentage contribution of each salesman in the total sale or what is the percentage contribution of marks by each student in overall result.

A column chart, on the other hand, is useful in analysing the comparative performance of the items. At one glance we can figure out the higher and lower values in comparison to others. For example, comparative performance of students in a test or performance of players scored run in a match.

Note: Hand diagrams of example charts can also be drawn with the answer.

Unit 5: Digital Presentation

All Exercises are practical oriented.

Assessment

A. Select the correct option to answer the following questions – 1 mark each.

- | | | | | | |
|-------|----------------------|-------|-------|-------|-------|
| 1. B | 2. D | 3. D | 4. C | 5. C | 6. C |
| 7. B | 8. D | 9. D | 10. A | 11. C | 12. B |
| 13. C | 14. B | 15. A | 16. D | 17. A | 18. D |
| 19. B | 20. D (All of these) | 21. D | 22. A | 23. B | 24. C |

B. Answer the following questions. – 2 Marks each.

1. List any 2 major features of a digital presentation program.

- Make appealing and engaging presentations with animations, transition effects and multimedia content.
- Presentation can be set up to run in different modes depending on the need.

2. **Briefly describe the preparation needed before presenting a slide show to the audience.**
Preparedness includes having all the facts at hand, answers to anticipated questions, explanation for each slide, appearance and body language, knowledge about audience, knowledge of equipment and software application.
3. **Describe any 2 main characteristics of an effective presentation.**
 - i. Presentation ideas should be relevant rational. They should tally with the core agenda and should convey the idea collectively in an effective way. This is the first pre requisite that piques the interest of your audience.
 - ii. Suitable communication skills and inter-personal skills with good command on the language and the subject is of utmost importance.
4. **How will you create a presentation using a template?**
To create a new presentation using a template, open LibreOffice and select Impress Presentation from the side bar. You can type Impress in Start menu search bar to access Impress quickly.
When Impress opens, by default, a dialog box displays a template library showing various presentation templates. Select the desired template and click on Open button.
5. **Raju has a presentation of 50 slides. He needs the presentation to run from 20th slide on pressing F5. What should he do?**
Before running a slide show, you can decide how it must run by using Slide Show Settings option in Slide Show menu. In Slide Show Settings dialog box, do the following settings as per your requirement:
Range: By default, all slides run in the slide show. You can select the starting slide in From drop-down.
6. **How will you use Impress User Guides on a Windows PC?**
Select LibreOffice Help option in Help menu. In the popup, click Read Help Online button. The help webpage will be displayed in your default web browser. From the Module drop-down, select Impress. You can also access free documentation by clicking User Guides option.
7. **Briefly describe the use of Blank and Title slide layouts.**
Blank: This layout has no placeholders. User has full control on adding any object like text box, image, table etc. depending on the need.
Title Slide: This slide has one placeholder for title and one for text. However, user can add other objects also.
8. **What are the 3 common ways in which a new slide can be added to or created in a presentation?**
 - i. Slide menu > New Slide option.
 - ii. New Slide drop-down on the Presentation toolbar.
 - iii. Copy-Paste or Slide menu > Insert Slide from File option > Locate the file in the Insert Slides/Objects pop-up and select it > Select the slides to insert and click OK.
9. **What do you mean by presentation modes?**
By default, slide show runs in full screen mode. You can select In a window or repeat slide show after a time period by mentioning the timing in Loop and repeat after box.
10. **What is the significance of custom slide shows?**
Using custom slide shows feature, we can create multiple slide shows with different slides according to your requirements. This is helpful in using the same presentation file for different audience or purposes.
11. **How is Outline view different from Notes view in a presentation?**
Outline View: This view displays only the text outline on your slides. It is used to review the content and proofreading it for correcting mistakes. Text can be easily drag-dropped to other slides in any sequence using this view.
Notes View: This view allows you to type notes for the current slide. Notes area is located below the current slide. Notes can be printed or included in the presentation.
12. **What is the significance of Emphasis type of animation effect?**
Emphasis animation effect works on the object visible on the slide. This type of effects draw attention to the object. For example, the object can become larger or may change its font colour etc.
13. **Ajit has an image of a butterfly added on the slide. He wants to move the butterfly over the slide as if it is moving randomly over a flower. What should he do?**
Ajit should use Freeform line option under Motion Paths Category and draw a random path for the butterfly.
View menu > Animation option. Select the butterfly > in Animation pane, click on Add Effect button > Select animation type Motion Paths in Category drop-down > Select the Freeform Line in Effect list and draw the path.

14. What are the 3 ways in which an animation can be triggered or started?

The three ways in which an animation can be triggered are:

- i. Start on Click: This will start the effect when the mouse is clicked.
- ii. Start With Previous: This will start the effect at the same time as the previous effect.
- iii. Start After Previous: This will start the effect when the previous effect ends.

15. What are the various ways in which multiple images can be arranged on a slide?

Images can be arranged in the following ways:

Bring to Front - brings the image on the top of all images.

Bring Forward - brings the image above the image over it.

Send to Back - sends the image in the bottom of all images.

Send Backward - sends the image below images behind it.

16. Karuna has a 20 slides presentation. She needs to display the logo of her school and the slide numbers at the bottom of each slide. What should she do?

She should select View menu > Master Slide option. The slide master will open up. Then, she should use Insert menu > Image option to insert the logo image on the master slide of same layout matching with that of her slide and arrange the image at the bottom of the slide.

17. You have made a presentation for Independence Day and want to display the tune of the national anthem when first slide appears. How will you ensure that?

Use Slide menu > Slide Transition option. The Slide Transition pane opens up in the Sidebar. Select a slide transition effect in it. Then, from Sound drop-down, select Other sound option and in the dialog box, locate and select the national anthem audio file.

18. How is slide transition different from animation?

Slide transition is the effect with which a slide appears on the screen during a slide show while animation is the effect that applies to any object on the slide with which the object either enters, exits or emphasises itself.

19. What is the significance of tables?

Tables are used to represent data in the form of rows and columns. It is very useful in organizing and presenting the data in an effective and formal way. Usually, tables are not animated and used to present data figures for the observation and analysis of the audience.

20. What are the three image modes?

The three image modes are:

- i. Grayscale: The pixels of the image are changed into various shades of Gray depending on its colours.
- ii. Black and white: The pixels of the image are changed into black and white.
- iii. Watermark: The image retains original colours but the intensity of the pixels becomes very low.

C. Answer the following questions. – 3 Marks each.

1. List any 5 features of a digital presentation program.

- i. Make appealing and engaging presentations with animations, transition effects and multimedia content.
- ii. Presentation can be set up to run in different modes depending on the need.
- iii. Insert images, tables and shapes.
- iv. Presentation can be run in different modes depending on requirements.
- v. Common content can be placed on slide masters to save time and effort.

2. Describe any 3 main characteristics of a presentation.

The opening of the presentation should create the urgency to engage the audience. It should present the problem and issue at hand in the most captivating manner possible – through an information slide, rhetorical question, interesting fact or a short video clip etc. It should work like a teaser of the movie. The objectives of the presentation should be set in the beginning.

The sequence of subtopics and discussions should be well-formed and should carry forward the message you want to convey. An improper sequence confuses the audience and raises a lot of questions.

Keep the content short and concise with bullet points. Use suitable images, charts and infographics (graphical summary) and keep the detail for explanation in your speech.

3. **How will you run a presentation from second slide and suppress all the animations in the presentation.**
Use Slide Show Settings option in Slide Show menu. In Slide Show Settings dialog box, do the following settings:
In Range section, select second slide in From drop-down.
In Options section, uncheck the Animation allowed checkbox.
4. **Briefly describe the Help feature of the digital presentation application.**
Impress Windows online help can be accessed by selecting LibreOffice Help option in Help menu or by pressing F1. In the popup, click Read Help Online button. The help webpage will be displayed in your default web browser.
From the Module drop-down, select Impress.
You can also access free documentation by clicking User Guides option.
5. **What is the basic difference between slide layouts and slide views?**
A presentation application provides different slide layouts. Layout refers to the arrangement of placeholders over the slide. Placeholders are the boxes that contain text, images, videos, tables etc.
Some commonly used slide layouts are Title slide, Blank and Title, Content etc.
Slide Views feature allows to view our presentation for different purposes for example Slide Sorter View to rearrange the slides easily by dragging their thumbnails, default Normal View to edit the slides, Outline View to review the text content etc.
6. **How is Emphasis animation different from Motion Path animation?**
Emphasis animation effect works on the object visible on the slide. This type of effects draw attention to the object. For example, the object can become larger or may change its font colour etc.
Motion Path animation allows the user to move an object on the slide over a guided path drawn by the user.
7. **What is the significance of animation and sound in a presentation?**
Presentation software provides several animation effects under various categories to be applied on the objects on the slide. An animated object makes the presentation appealing and engaging.
Sound is the soul of animation. Sound makes the presentation lively and effective.
8. **How will you ensure that all the animation in a slide run in a sequence with each animation running exactly after 3 seconds when the previous animation finishes?**
Click on View menu > Animation option to display Animation panel. Then, using Animation pane, apply animations one by one to the objects in desired sequence with following settings:
i. In Start drop-down, select Start After Previous option.
ii. In Delay box, specify 3 seconds.
9. **Ravi wants to display the names of his team members appearing on the last slide and then disappearing slowly. What should he do?**
Click on View menu > Animation option to display Animation panel. Then, in Animation pane, select Category as Emphasis for the names textbox. Select Fade out effect. Select Duration as Slow.
10. **Describe 5 major operations that can be done on an image?**
 - i. Position: Image position and size can be changed in following ways:
In Properties panel or by clicking Position and Size button in the Image toolbar, you can change the position of the image on the slide (this is easily done using mouse also).
 - ii. Resize: You can resize the image using mouse or by changing Width and Height in the panel.
 - iii. Rotate: Rotate the image using Rotate control in Properties pane or Transformation drop-down > Rotation button in the Image toolbar. Grab the rounded handles around image and rotate it using mouse.
 - iv. Crop: Unwanted surrounding part of the image can be removed. To do so, select the image and click on Crop button on the Image toolbar. Using mouse, drag the handles around the image carefully to crop the image.
 - v. Apply Color Modes: Image can be converted in to modes - Grayscale, Black/White or Watermark in the Image section of the Properties pane or by using Image Modes drop-down in the Image toolbar.
11. **How are shapes useful in presenting an idea? List 2 shapes from at least 5 shape categories.**
Shapes enhancing the presentations. They are helpful in illustrating the idea easily by constructing figures using various diagrams, flowcharts, callouts and a variety of other shapes.
 - i. Category-wise shapes are:
 - ii. Basic shapes: Rectangle, Cube
 - iii. Symbol shapes: Smiley, Cloud

- iv. Block arrows: Up, Down
- v. Flowchart: Process, Decision

12. How is a slide master different from a normal slide? What is the significance of slide master?

Normal slide is an individual slide which can be modified in Normal View as user needs. Slide Master is visible in Master View. Slide Master allows to put those objects and contents on the slide which user needs to show on all the slides of that layout. For example, if user has inserted a logo in the slide of Blank Layout in Slide Master, then all the slides of Blank Layout in the presentation will display that logo. This way slide master allows adding common content on multiple slides of similar layout.

D. Answer the following questions. – 5 Marks each.

1. What is a digital presentation application? Briefly discuss any 4 features of a digital presentation application.

A digital presentation application lets the user arrange the information and content on multiple slides which can be arranged in a particular sequence. A digital presentation application provides features of creating and editing the presentation, managing the slides and generating slide show for the intended audiences.

Some popular digital presentation applications are OpenOffice Impress, LibreOffice Impress, Microsoft PowerPoint, Google Presenter (online) etc.

4 features of a digital presentation application are:

- i. We can create professional quality presentations in multimedia form. Multimedia includes text, sound, images, animation, videos shapes, charts and other graphical objects.
- ii. Slide shows can be made appealing and interesting through animations, slide transitions and multimedia are a few of the techniques you can use to make your presentation more exciting.
- iii. A variety of slide layouts helps user organise the content easily and quickly on the slides in various ways such as Title only, Title and Content etc.
- iv. For various purposes, various slide views are there. User can view the content in various viewpoints for easier work.
Suitable slide timings can be recorded through rehearsal run of the presentation.
- v. Presentation can be set up according to various needs like running it without animations, running it automatically or manually etc.

2. What is animation? What are the 4 categories of animation? Describe them.

Animation is one of the chief ingredients of electronic presentations. An animation makes the presentation effective, attractive and professional looking. A simulation of movement, created by displaying a series of pictures, or frames is called animation. An animation contains visual effects (including movement) and sound effects. Animation can be applied to the text, images, shapes, tables, SmartArt and other objects. With animation, an idea can be explained in a smooth flow one-by-one. Animations can run automatic and in different sequences to suite the needs of the user.

The 4 categories of animation are:

- i. Entrance Animation Effect: It determines the manner in which an object enters onto the slide.
- ii. Emphasis Animation Effect: It does something to draw attention to an object. For example, the object can become larger or change font colour or rotate.
- iii. Exit Animation Effect: It determines the manner in which an object leaves a slide.
- iv. Motion Paths Animation: It determines how an object moves on a slide following a path.

3. Discuss the characteristics of a presentation.

In a good presentation, ideas should be relevant and rational. They should tally with the core agenda and should convey the idea collectively in an effective way. The opening of the presentation should create the urgency to engage the audience. The objectives of the presentation should be set in the beginning. The sequence of subtopics and discussions should be well-formed and should carry forward the message you want to convey.

Keep the content short and concise. Use suitable graphics wherever required. Use the opening to connect with the audience. Keep a well-defined and rehearsed opening, mid-part and ending. The appearance and body-language of the presenter should be suitable. The language of explanation should have positive tones. Overall, a presentation should be well-designed, planned, rehearsed and anticipate situations such as possible questions. It should involve the audience.

4. Briefly discuss the factors that influence an ongoing presentation.

When presentation begins, following factors influence it.

- i. Environment: The venue or location and its ambience make the environment of the presentation. Presentations are mostly formal so a formal setup is required. The place should be noise-free with suitable lighting and audience should be seated suitable to see and listen to what has been presented.
- ii. Audience preparedness: Audience should know the agenda of the presentation beforehand. This can be done through notes pages distributed among them.
- iii. Audience Interaction: As required, the interaction with the audience should be kept at optimum level. Most of the interaction happens during questioning hour.
- iv. Winding up: Presentations may end with effective summary followed by question-answer session, feedback and sometimes action plans for future.

5. Why do we have various slide layouts? Briefly discuss some common slide layouts.

A presentation application provides different slide layouts. Users need to display different kind of content on the slide. Slide layouts help in quick and easy arrangement of content on the slides. Layout refers to the arrangement of placeholders over the slide. Placeholders are the boxes that contain text, images, videos, tables etc.

Impress provides following commonly used slide layouts:

Blank: This layout has no placeholders.

Title Slide: This slide has one placeholder for title and one for text.

Title, Content: It contains a placeholder for title and one to contain text, chart, table, image or video.

Title, 2 Content: It has one placeholder for title and two for content.

Title Only: This layout has only one placeholder for title.

Centered Text: It has one placeholder for center-aligned text.

Other layouts are Title, 2 Content and Content; Title, Content and 2 Content; Title, 2 Content over Content; Title, Content over Content; Title, 4 Content and Title, 6 Content.

6. Why do we have various views of presentation? Briefly discuss Notes, Slide Sorter and Outline view of a digital presentation application.

A presentation application provides different slide layouts. Users usually add new slides, edit the existing ones and manage the slides in different ways. For the ease of working with Impress, there are different view which can be used as suits the user. Following are the views in Impress.

- i. Notes View: This view allows you to type notes for the current slide. Notes area is located below the current slide. Notes can be printed or included in the presentation.
- ii. Slide Sorter View: This view sets all the slides in thumbnail form, on the screen so that you can see how they look as a whole and apply transition effects and design changes to the whole presentation at once. This view helps you to sort and organize the sequence (by dragging) of the slides.
- iii. Outline View: This view displays the outline of the slides. This view displays only the text on your slide. This view is helpful in reviewing the content and proofreading it for correcting mistakes. Text can be easily dragged to other slides in any sequence using this view.

7. Discuss various text cases and text alignments in a digital presentation application.

In Impress, you can type or convert the sentence into six cases. Various text cases are:

- i. Sentence case: It converts the first letter of the first word of the sentence in upper case. This is the default case in Impress.
- ii. lowercase: It converts all the letters into the lower case.
- iii. UPPERCASE: It converts all the letters into the upper case.
- iv. Capitalize Every Word: It converts first letter of each word of the sentence into the upper case.
- v. tOGGLE cASE: It reverses the cases of all the letters of a sentence.
- vi. Clicking on Cycle Case repeatedly will cycle you through UPPER CASE, lower case and Capitalize Each Word case.

In Impress, text can be aligned in following ways:

- i. Horizontal alignment: Text is aligned between left and right sides of the text box. These are left (default), right, center and justified. Justified text is equally spread along left and right margins giving the text a symmetrical look.
- ii. Vertical alignment: Text is aligned between top and bottom sides of the text box. These are top (default), center vertically and align bottom.

8. How is a bullet list different from a numbered list? What is their distinct significance? If you are writing the steps to perform a task in a software, which type of list should you make and why?

A bullet list indicates each item with a bullet symbol in particular shape (square, circle etc.) while a numbered list, as the name suggests, indicates the items with numbers in different formats such as 1, 2, 3; I, ii, iii or A, B, C etc. The application provides the two types of lists for distinct purpose.

For any list in which sequence of items is not important then a bullet list can be used. For example, a list of features of a product, a list of assignments completed, a list of cities etc.

If user needs to create a list of items that should appear in a particular order, then numbered list can be created. For example, steps to assemble a product, shutdown the computer, perform some tasks etc.

To perform a task in a software, the list should be numbered to indicate the correct sequence of steps.

9. Briefly discuss the significance of 4 types of animation.

Animation makes the presentation effective, attractive and professional looking. Impress provides different categories of animation for different purposes such as:

- i. Entrance Animation Effect: It determines the manner in which an object enters onto the slide. This animation is useful when an idea has to be revealed to the audience at a suitable time.
- ii. Emphasis Animation Effect: It does something to draw attention to an object. For example, the object can become larger or change font colour or rotate. This kind of animation is useful in asserting focus on a particular part of the content.
- iii. Exit Animation Effect: It determines the manner in which an object leaves a slide. This animation is useful in giving additional effect by making the content disappear as it gets irrelevant as discussion moves on.
- iv. Motion Paths Animation: It determines how an object moves on a slide following a path. This animation is useful when user needs to animate an object in a particular way over a guided path.

10. Discuss the properties – start, direction, duration and delay for an animation.

To make animation provide suitable effect on the content during the presentation, we can control the animation in different ways such as:

Start: It specifies the option/method to play the animation. There are three options:

- i. Start on Click: This will start the effect when the mouse is clicked.
- ii. Start With Previous: This will start the effect at the same time as the previous effect.
- iii. Start After Previous: This will start the effect when the previous effect ends.

Direction: For certain effects, we can set the animation direction such as from left, from top etc.

Duration: It specifies how long the animation will run. This way animation speed can be controlled.

Delay: It sets the wait time before the animation begins. This makes the beginning of animation quicker or slower.

11. What is a master view? How is it useful? How is it different from Normal view?

Slide Master view enables you to apply those modifications on the slides which you need on almost all the slides such as displaying slide number or a logo or some common text or object. Editing the slide master, affects every slide, including the newly added slides, in the presentation. This saves time and effort of modifying every slide individually.

Normal slide is an individual slide which can be modified in Normal View as user needs. Slide Master is visible in Master View. Slide Master allows to put those objects and contents on the slide which user needs to show on all the slides of that layout. For example, if user has inserted a logo in the slide of Blank Layout in Slide Master, then all the slides of Blank Layout in the presentation will display that logo. This way slide master allows adding common content on multiple slides of similar layout.

12. Raju wants the first slide to appear with a sound and effect. Then the contents of the slide should come flying in from top. What should he do? His friend Amit needs to run the same slide without animation effects. How will he achieve this without removing the animation effects?

The effects with which a slide appears on the screen during the slideshow is called slide transition. Raju can apply a transition effect by going to Slide menu > Slide Transition option. The Slide Transition pane opens up in the Sidebar. There, he must select a suitable effect and from the sound drop-down, he can select a sound effect. The contents of the slide can be animated by selecting the contents and then by going to View menu > Animation option. In Animation pane, click on Add Effect button. Select animation type as Entrance in Category drop-down. In Effects, he must select Fly in and in Direction: From top.

Amit can use the same presentation by unchecking the Animation allowed checkbox and pressing OK on Slide Show Settings dialog box which can be displayed by using Slide Show Settings option in Slide Show menu.

Class X

Employability Skills

Unit 1: Communication Skills-II

SESSION 1: Various Methods of Communication

Exercise

1. What do you mean by oral communication?

Oral communication is a means of verbal communication where sender and receiver remain present in person. It is done by speaking to each other.

2. List the things we should keep in mind while communicating orally.

Active listening, clarity of the purpose of communication, clear and direct communication, suitable language and vocabulary.

3. How does body language influence our communication positively?

Confident and clear voice, direct, frank eye contact reflects confidence, truth and sincerity. Eye contact engages others in our conversation. Positive postures and gestures reflect interest, suitable smile, understanding, sincere eyes, composed and calm face and proper use of personal space together make our body language positive.

4. How does body language influence our communication negatively?

Unclear speech, low voice, improper eye contact reflects lack of confidence or you are lying, fidgeting, slumping, changing posture frequently show lack of interest, frown, grimace, lack of smile, and not respecting personal space together make our body language negative.

5. Explain the role of non-verbal communication in our day to day communication.

Non-verbal communication occurs along with non-written verbal communication (oral, telephonic, video meeting) and greatly affects the verbal communication. Verbal communication refers to what is said while non-verbal communication is how it has been said. The factors that constitute non-verbal communication are in general referred to as body language that includes our posture, gestures, expressions, tone and quality of voice, and our movements etc. Our emotions also play a vital role. How do we respect personal space of others, how do we greet people, shake hand and converse with right expressions and posture determine the effectiveness of our verbal conversation.

6. What are the importance and limitations of visual communication?

Visual communication is instant, specific, clear and with zero ambiguity. Visual symbols support what we communicate. The creativity of symbols, charts and graphics make the communication interesting and break the monotony of speech and written word.

Limitations

- It has its usefulness up to some extent only.
- It cannot replace the content of speech and written word completely.
- It plays supporting role in communicating our ideas.
- Symbols which are not accepted as standard are difficult to understand.

7. List the meaning of any 10 signs and symbols you have seen around in public places.

No U turn, Stop, No parking, No smoking, Speed limit 45, One way, Road Diversion, No Horn, School ahead, Left turn.

SESSION 2: Providing and Receiving Feedback

Exercise

1. What is the role of feedback in communication cycle?

A feedback completes the communication cycle. Feedback helps in improving upon the communication. Further responses in an ongoing communication are devised by the feedback received. This leads to the fulfilment of the actual purpose of communication. This helps in making all the parties satisfied which are involved in the process of communication. Since feedback improves quality of communication, the productivity of those involved is enhanced and it also aids in rendering suitable environment for deliveries to achieve the goals.

2. **How should we perform feedback gathering during communication cycle?**
 - Listen to the feedback giver and let him/ her finish before responding.
 - Try to make note - either mental or on paper – of what is being shared by the feedback giver.
 - Your body language while receiving the feedback should reflect positive vibes and attitude.
 - Remember that feedback is for improvement in further performance. Do not take it as personal criticism.
 - Do not let emotions come in the way of feedback exchange process. Here, your emotional intelligence needs to be in a balanced mode.
 - To clarify any doubts or to seek any explanation on anything that you do not understand, ask precise and short questions. Do not spiral into long, disconnected, vague queries for they will lead into further confusion and beat the entire purpose of feedback.
 - If you think that instant response is not possible from your side on the feedback, ask permission for some time to draft or create your response so that you come back effectively, clearly and in a positive way to take the discussion further on the feedback.
3. **List 4 examples of providing feedback.**
 - A team leader in an office providing inputs on his analysis of his team mates' performance.
 - A teacher discussing the test performance of students to help them improve on their studies and result.
 - A client sharing his views on the product delivered by the vendor.
 - A business analyst providing pointers to the sales team after analysing its sales performance.
4. **List the advantages of feedback in brief.**

The feedback is given to people to help them improve their performance or output. A feedback completes the communication cycle. Feedback also helps communicators adapt to the changes in communication. Feedback helps communicators devise their next response and ensure that actual purpose of communication is met. Feedback brings about the fruitful end of the communication. Feedback enriches the quality of communication, productivity of the people and creates a conducive environment for performance and achieving the goals.
5. **List 4 major skills of giving and receiving feedback.**

Feedback giving skills:

 - Give timely feedback. Delay in feedback loses its effectiveness.
 - Feedback should not judge or compare a person. It should not 'smell' of bias.
 - Feedback should be fair and supportive.
 - Feedback should be complete and consistent throughout a communication cycle.

Feedback receiving skills:

 - Being attentive while receiving feedback.
 - Making mental or paper notes.
 - Keeping a check on emotions.
 - Do not feel being criticized or pinned down. Take it with a pinch of salt and work upon the feedback.
6. **What is the basic difference between specific and general feedback?**

General feedback is most suitable for short durations such as a feedback after a class test. This helps in quicker improvements. General feedback covers just the general details which help in improving on the further actions to be done such as upcoming exam.

Specific feedback includes point-by-point details. It also goes in quiet detail for the corrective actions suggested by the feedback giver to the feedback receiver. Specific feedbacks are helpful in improving all the areas that are required to achieve a goal.

SESSION 3: Communication Barriers and Its Measures

Exercise

1. **Is it true that every communication may have certain barriers? How?**

There is nothing like perfect communication environment or process. Barriers are always there in any kind of communications such as environment, noise, prejudice, body language, emotions etc.
2. **How do communication barriers adversely affect communication cycle?**

Not using simple, non-ambiguous, clear and relevant language. The image and impression of the other person makes

us prejudiced towards him and we judge according to it what he/ she says. Disability in hearing, negative body language, difference in accent, pronunciations, customs & culture, noise, distance, location etc. adversely affect our communication cycle.

3. **List certain major communication barriers in day to day communication.**
Language, inappropriate emotions, perceptions and prejudice, body language, cultural and language differences, noise, physical barriers.
4. **List major ways to overcome common communication barriers.**
Be prepared, use of suitable language, right emotions and attitude, drop prejudices, handle physical challenges, positive body language, establish expectations, proper use of communication medium.
5. **List some day-to-day real life communication barriers you have observed.**
Emotions, attitude, language, lack of attention, improper body language, prejudice and perceptions.
6. **How does body language pose barriers in communication? How can we take care of it?**
Often, signals from body language are either avoided or misinterpreted. The reason is that body language signals are too fast, simultaneous and dynamic. There could be several possible reasons of incorrect devious body language signals such as a person looking dull may be not well but still be interested in what you say or a person giving cold handshake may still come up as enthusiastic and confident during later communication process.

SESSION 4: Principles of Effective Communication

Exercise

1. **How can you say that a communication done is effective? Take a small example.**
If the communication purpose is established, it is clear, complete with no ambiguity and is based on right facts then we can say that it is done effectively. For example, when teacher mentions the objectives of the classroom session then it is clear, complete and based on facts such as "After this session, you will be able to list 3 advantages of computers."
2. **What factors determine an effective communication?**
Sender, proper encoding of message, communication channel, proper decoding of message, complete, clear, short, correct and concrete message.
3. **List any 5 characteristics of effective communication**
An effective communication is:
 1. based on right facts and clear.
 2. concise and to-the-point.
 3. helps in developing relationships and goodwill.
 4. leads to achieving set goals and outcomes.
 5. establishes clear responsibility of the people involved in the process.
4. **List 7 Cs of effective communication.**
Complete, concise, considerate, clear, concrete, courteous and correct.

SESSION 5: Basic Writing Skills

Exercise

- A. **Identify the types of phrase in the following paragraph:**
Pleasantly surprised (adjective) meeting her friend (verbal), at the airport (prepositional), had been sitting (verbal), in the waiting lounge (prepositional), spotted her (verbal and noun). a lot of experience (noun), time flew very fast (verb, adverb), boarded the same flight (verb), bound to Mumbai (prepositional).
- B. **Identify the parts of speech in the following paragraph:**

NOUN	PRONOUN	VERB	ADJECTIVE	ADVERB	PREPOSITION	CONJUNCTION	INTERJECTION
Girl	Her	Lived	Poor	Very much	On	Who	Wow
Anna	She	Thought	New	Suddenly	In	So	Alas
Mother		Loved	Useful		To	And	

Year		Thinking	Beautiful			Which	
Gift		Sew	Long			But	
Hair		Buying	Colourful				
hair ribbons		Wished	Too old				
Clothes		Buy	Shining				
Villagers		Did	Enough				
set of needles		Got	Short				
Threads		Called					
glass box		Said					
Money		Have					
Idea		Saying					
eve of new year		Removed					
Cap		Showed					
Barber		Bought					
		Selling					

Exercise

A. Identify main clause and conjunctions in following Complex Sentences:

MAIN CLAUSE

CONJUNCTION

- | | |
|--|-------------|
| 1. The science show was very interesting | as |
| 2. that he's rich and famous | Now |
| 3. he trained thoroughly | Even though |
| 4. winter is coming | Since |
| 5. she was younger | When |

B. How can you say that following sentences are compound sentences:

The following are compound sentences because they have two independent clauses (underlined) separated by conjunctions (bold)

1. She walked to class, but Ravi ran.
2. I like pizza, but my brother likes green vegetables.
3. The nurse held up a doll, and the little girl giggled.

Exercise

A. Fill in the blanks with the suitable article:

1. The
2. The
3. an
4. a
5. The

B. Is there anything wrong with these sentences? Why? / Why not?

All sentences are okay because 'the' is not used before sports name, food item, metal name, proper noun, food name like breakfast, lunch, dinner and colour name.

Exercise

1. Write a paragraph with a topic on the following hints:

Travelling is fun with adventure. It is a good hobby as it presents opportunities to visit new places and meet interesting people. Travelling lets us make new friends in far places. We get to learn about various cultures, a variety of languages

and cultures. Visit to different places enhances knowledge, we meet different people. It accounts for good for health since a tourist is an active and dynamic person. Travelling keeps us fit. Travelling is also a good career option. One can write about the places travelled and publish them in the form of books, blogs and articles. When we meet different cultures and people, we develop an understanding about them, It inculcates good habits such as patience, care, love and concern for others. Overall benefit of travelling is that it improves personality. The only downside of travelling is that it is an expensive hobby. It needs money to travel to different places. Food, stay and other related expenses make it an exclusive hobby. It also claims a lot of time.

Assessment

1. Describe briefly how we can ensure effective verbal communication.

We can ensure effective verbal communication by active listening, asking questions, being clear on the agenda of the communication, by encoding correct, clear and complete messages, by using proper language and vocabulary, by being prepared before communicating, by anticipating responses for better communication, by avoiding out-of-context references.

2. How is active listening important in verbal communication?

In oral communication attention is the key. Sufficient amount of attention helps understand the message and decode it correctly. Active listening also enables us to ask correct questions to seek any clarity. This leads to mutual understanding and overcomes any barriers. It also helps in avoiding any conflicts later.

3. How does body language affect our non-verbal communication?

Confident and clear voice, direct, frank eye contact reflects confidence, truth and sincerity. Eye contact engages others in our conversation. Positive postures and gestures reflect interest, suitable smile, understanding, sincere eyes, composed and calm face and proper use of personal space together make our body language positive.

Unclear speech, low voice, improper eye contact reflects lack of confidence or you are lying, fidgeting, slumping, changing posture frequently show lack of interest, frown, grimace, lack of smile, and not respecting personal space together make our body language negative.

4. List some positive body language signs concerning body posture, gestures, expressions, eye contact, touch, personal space and voice.

Erect stance, relaxed, straight posture, attentive eye contact, sincere nod with the face, sitting with open hands, straight shoulders are signs of positive postures and gestures. Direct, frank eye contact reflects confidence, truth and sincerity. Eye contact engages others in your conversation. Proper handshake and touch. Being respectful to other people's personal space creates a good impression and people open with you quickly. Clear and confident voice.

5. How is visual communication different from general communication we do day-to-day?

In visual communication, message is decoded and encoded in the form of symbols, pictures, graphics, signs and charts etc. Visual communication is required where message has to be communicated quickly such as traffic signals. Visual communication supports general communication. General communication is suitable where detailed process is needed to communicate information. General communication relies on the language and body language.

6. What important role does feedback play in effective communication?

Without feedback communication cycle is incomplete. Feedback helps in further communication during the process. Suitable feedback prepares us for next response in a better way. Feedback completes the communication cycle by achieving the set goals. A good feedback enhances the quality of communication, increases productivity and helps in performing well to achieve the goals.

7. List certain ways of giving and receiving feedback.

Providing Feedback

- Give positive feedback.
- Feedback on behaviour and attitude.
- Discuss negatives tactfully and suggest improvement.
- Do not be personal in giving feedback.
- Chose a place where no one should disturb.

Receiving Feedback

- Do not interrupt the feedback giver.
- Listen attentively.
- Keep positive body language.

- Understand that feedback is not criticism.
- Be in self-control.
- Ask short, specific questions.
- If needed, ask time to prepare for your response.

8. How are general and specific feedback different? What is the advantage of specific feedback?

General feedback is quick feedback. It takes shorter time. This helps in achieving short term goals and quicker improvements. General feedback covers just those details which are useful in improving on just those actions which are required further to improve upon the performance.

Specific feedback is a detailed feedback and includes point-by-point findings. It also details upon the suggestions for improving on the gaps. Specific feedbacks are helpful in improving all the areas that are required to achieve a goal.

9. What do you mean by communication barriers? How can we overcome these barriers?

Any factor or element that affects the communication process adversely is called communication barrier. There are several factors that constantly function as barriers for better communication. Physical conditions constitute the environment of communication. Hot or cold room, bad seating, poor light, defective communication medium, slow speed of internet while interacting online are environmental barriers in communication. These can be anticipated and taken care of in most of the cases.

Noise, distractions of any sort, distance, undesired turn of events during the communication process are situational barriers which are sometimes difficult to anticipate and need to be handled deftly as they occur.

We tend to jump to conclusions. Emotional state, patience level, temperament, liking and disliking of the communicators are some barriers in effective listening. Unprejudiced, fair and attentive listening is a skill that can be developed slowly for successful receiving and decoding of the message.

10. Describe some important principles of effective communication.

- Setting up a communication code: Communication code means deciding the manner in which the communication must occur. The language, environment and mode of communication also help in setting up the code of communication.
- Proper message encoding: For effective communication, message needs to be encoded well. Such message is clear, complete and correct. Well encoded message has clear purpose.
- Proper message decoding: Decoding of the message is done by the receiver. It means how the receiver interprets the message. Active listening, being aware of the purpose of the communication and a considerate temperament are the keys to correctly decode the message.
- Suitable response to the message: The suitable response of the receiver is also an important factor. This decides further progress of successful communication.

11. Describe any 5 Cs (change 7 to 5) of effective communication.

- Complete Message: A message should cover who, what, when, where, why and how. Who this message is meant for? What exactly do you need to convey? When is the right time to communicate? Where are the participants? Why do you need to do this communication? How are you going to communicate?
- Concise Message: Concise message is short but complete or appropriately sized. Message with unnecessary details adds to confusion. A too short message may not be clear or incomplete.
- Considerate Message: Consideration makes a good communicator. A considerate communicator keeps the requirements of the recipient. Such as language of the message should be easier for receiver to understand.
- Clear Message: A clear message is always in plain, easy language with no unnecessary details to avoid ambiguity and confusion. Message should have facts specified in short and simple sentences.
- Concrete Message: A concrete message mentions expected outcomes of the communication. Concrete message focuses on the central idea and purpose of the communication.

12. What do you mean by complete, concise and concrete message?

Complete message should cover who, what, when, where, why and how. Who this message is meant for?, What exactly do you need to convey?, When is the right time to communicate?, Where are the participants?, Why do you need to do this communication?, How are you going to communicate?.

Concise message is short but complete or appropriately sized. Message with unnecessary details adds to confusion. A too short message may not be clear or incomplete. Concise message contains necessary and relevant information.

A concrete message contains expected outcomes of the communication. Concrete message encompasses the core idea and purpose of the communication. It avoids unnecessary details to prevent confusion.

13. How is a phrase different from a sentence? Give 2 examples.

A set of words that indicates some object or action but does not make complete sense is called a phrase while a group of words that makes complete sense is called a sentence.

A phrase is a part of a sentence. For example:

Phrase: a red bicycle

Sentence:

Lata is riding a red bicycle.

Phrase: is sitting

Sentence:

The monkey is sitting on the tree.

14. Giving 2 example each, explain compound and complex sentence.

Compound sentence: A compound sentence has at least two main, independent clauses and may have subordinate clauses. All clauses are separated by conjunctions (like and, but, while, when, which, whereas, therefore etc.)

E.g. I would like to have a coke or a cold coffee.

Here, or is conjunction joining two main clauses - have a coke and a cold coffee.

Complex sentence: A complex sentence has only one main clause and at least one subordinate clause.. E.g. She was not happy with Ravi because he was late for work.

[first clause is main and second one is subordinate]

Because Ravi was late for work, she was not happy with him.

[first clause is subordinate and second one is main]

15. How does article differ in usage for consonants and vowels? Explain with 2 examples.

Indefinite articles, 'A' and 'an' are indefinite articles which are used with singular noun.

For example,

There bought a book.

I saw an aeroplane.

Article 'an' is used before vowel sounds and 'a' is used before a consonant sound.

For example,

He eats an apple daily.

Butterfly is an insect.

Unit 2: Self Management Skills-II

SESSION 1: Stress and Its Effects

Exercise

1. What do you mean by stress? What is the difference between eustress and distress?

When body and mind try to adjust with the changes around us, we go into a state of stress. Eustress is the good effect of stress like we feel elated when we pass the exam with flying colours. Distress is negative form of stress like we feel discouraged when we fail in achieving something.

2. List some common symptoms of physical and psychological stress.

Common physical effects of distress: Headache, Muscular tension, fatigue, chest pain, upset stomach, disturbed sleep and low energy.

Common psychological effects of distress: Anxiety, feeling demotivated, loss of attention, depression and frustration, angry outbursts, drug and alcohol abuse, social withdrawal, over reaction.

3. List some distress symptoms due to over-work or over-study.

Headache, fatigue, disturbed sleep, low energy, anxiety, feeling demotivated, loss of attention, depression and frustration, angry outbursts and over reaction.

4. How does stress affect working women?

Working women experience tremendous stress. Taking care of domestic chores and home making becomes difficult. Balancing with relations, friends and work causes a great deal of stress.

5. What do you mean by internal stress?

Internal stress is the outcome of our thought process. It is more of a mental state that brings about anxiety, fear of any possible problem, unrealistic expectations etc. Internal distress needs to be dealt with timely otherwise it may cause headache, heart trouble, insomnia, memory loss, loss of focus etc.

6. What is fight-flight-freeze response?

Fight-flight-freeze is the response due to need of survival in sudden danger. One part of our nervous system controls fight-or-flight response. This prepares the body for violent response. After the response is through, other part of nervous system helps body to return to normal condition.

In freeze response, body is unable to respond for certain duration until the danger passes or the victim succumbs to the danger. This response triggers when impending danger seems too much to deal with. It also triggers during certain very normal situations such as public speaking.

SESSION 2: Stress Management Techniques

Exercise

1. Being a student, list some common stress symptoms you feel.

Students should answer this themselves.

2. List the sources of this stress.

Students should answer this themselves.

3. List some good working or study habits.

- Discipline and plan.
- Do not try to please everyone. Learn to say no if you really cannot help something.
- Keep work-family balance. For scholars, keep a study-recreation balance.
- Plan your breaks and holidays.
- Stick to deadlines or self-study timetable.
- Do not over-work or over-study.

4. How will you manage internal stress?

- Positive attitude.
- Adapt to the changing situations as much possible.
- Be firm not angry or aggressive.
- Keep fit.
- Manage time effectively.
- Good sleep, laughter, hobbies, good meal.
- No smoking, alcohol and any such vice.
- If needed, seek medical advice.

5. How does going on vacations, morning walks and following a hobby help in reducing stress?

Take nature walks or early morning walks to relax the mind and re-energise the body. Going on vacations boosts energy due to change of place and climate. Following a hobby boosts positive stress.

SESSION 3: Ability to Work Independently

Exercise

1. What do you mean by working independently?

Being able to work independently means accomplishing the tasks assigned to you without unnecessarily claiming the time of other people. It means you are aware of your strengths and weaknesses, able to adapt with the team, own your task and take responsibility of any mistakes.

2. List the skills required to work independently.

- Ability to organise work as the needs arises.
- Personal integrity.
- Ability to handle multiple tasks efficiently.
- Self-awareness of abilities and limitations.
- Self-discipline and self-regulation.
- Communication skills.
- Ability to adapt to the changing situations.
- Handling failures and setbacks positively and responsibly.

3. **What do you mean by multi-tasking, self-discipline and agility?**
 Multitasking means doing multiple tasks as per their priority and completing all of them successfully.
 Self-discipline and self-regulation come from self-management. Able to identify time-wasting activities. Knowing how to regulate yourself to utilise the time at hand for completing tasks timely.
 Ability to adapt to the changing situations and managing time accordingly is called agility. Delivering with short time lines and knowing how to utilise time effectively.
4. **Can you cite any failure which became a learning experience for you?**
 Students should answer this themselves.
5. **What are internal and external self-awareness?**
Internal self-awareness: This is built on our value and belief system. Our values determine our passions and standards. With self-awareness we get familiar with them. These help us in dealing with our surroundings and situations.
External self-awareness: When we can successfully assess how other people view us is called external self-awareness. The benefits of external self-awareness are self-improvement, leadership skills, interpersonal skills etc.
6. **List some ways to become self-aware.**
 - Reflect on your thoughts.
 - Practice good listening and become a good listener.
 - Ask for feedback from others about yourself.
 - Think in terms of “what” instead of “why”. For example, What could be the possible reasons instead of why it is happening to me?
7. **How self-motivation and self-regulation help you achieve your goals?**
 Self-motivation enables us to take action on our ideas and thoughts. Our weaknesses control our self-motivation. To counter this, we need to be self-aware. Being self-aware in a proper way helps us convert our thoughts into actions. For this self-regulation and discipline is also necessary. By using all our strengths and abilities we overcome our weaknesses which brings in self-regulation and which, in-turn, helps us achieve our goal.

Assessment

1. **What do you mean by the term self-management?**
 Managing oneself in order to achieve desired goals and targets is called self-management. Every task we do has a thought process behind it. This gives birth to a plan to follow in order to accomplish that task. Self-management Exercise which involves management of resources, time management, identifying goals to achieve and prioritizing the goals.
2. **Why is self-management important for us?**
 Self-management brings inspiring personality, clarity of thoughts, respect for the importance of time, higher achievement rate, self-discipline, social popularity.
3. **Differentiate between eustress and distress with example.**
 Positive stress is known as eustress while negative form of stress is called distress. Eustress is commonly identified by excitement, elation and charging up of emotions. Like, when we get promoted to a higher class, we feel happy, excited, elated. Eustress promotes positive feelings like motivation, positive energy, excitement. But eustress is generally short term.
 Distress is the reaction of our body to the harmful situations - real or imaginary. Distress affects us physically as well as psychologically. Headache, muscular tension, fatigue, disturbed sleep, anxiety, feeling demotivated etc are symptoms of distress.
4. **Discuss how stress affects us physically and psychologically.**
 Distress is the reaction of our body to the harmful situations. Distress affects us physically as well as psychologically.
 Common physical effects of distress: Headache, Muscular tension, Fatigue, Chest pain, Upset stomach, Disturbed sleep and Low energy.
 Common psychological effects of distress: Anxiety, Feeling demotivated, Loss of attention. Depression and frustration, Angry outbursts, Drug and alcohol abuse, Social withdrawal, Over reaction.
5. **What is chronic distress? Discuss stress in professionals due to work.**
 Distress which is ignored for a long time and then it becomes like a habit. It seriously affects our body and mind. Our profession determines the amount of stress. Some common reasons for work related distress are higher performance

expectations, difficult deadlines, job insecurity, team conflicts, differences with superiors, working conditions and hours etc.

6. What do you mean by internal distress? How will you manage it to reduce its adverse effects?

Anxiety, fear of impending disaster, unreal worries. Internal distress builds up inside and leads to headache, heart ache, insomnia, memory loss, chronic anxiety, high blood pressure and loss of focus.

Some tips to deal with internal stress are:

- Positive attitude.
- Adapt to the changing situations.
- Keep fit.
- Manage time well.
- Good sleep, laughter, hobbies, good meal etc.
- Quit smoking, alcohol and any such vice.
- If needed, seek medical advice.

7. Explain the distress effects due to environment and surroundings.

Our unsuitable surroundings and environment cause distress. When we talk about environment, there are following two aspects:

Quality of surroundings: Noisy, dirty, polluted, crowded, low quality of life (food, water, electricity and other amenities)

Work and living conditions: Distractions, congested work place, interaction and relationship with people, shabby place.

8. Explain fight-flight-freeze response during mortal danger. How does our nervous system handle this response?

Fight-flight-freeze is the response due to need of survival in sudden danger. One part of our nervous system controls fight-or-flight response. This prepares the body for violent response. After the response is through, other part of nervous system helps body to return to normal condition.

In freeze response, body is unable to respond for certain duration until the danger passes or the victim succumbs to the danger. This response triggers when impending danger seems too much to deal with. It also triggers during certain very normal situations such as public speaking.

9. How can we identify the source of stress?

Find answers to the following questions:

- What are the real reasons of my anxiety? (Are they real or imaginary?)
- Am I working under pressure for long? (Do I need a break?)
- Do I really feel right? (Am I not well or need to take medical advice?)
- Am I emotionally upset at something or someone? (Do I need to talk to someone?)
- Are my activities time-wasting? (Do I need to review my working or study plans?)

10. How can healthier life style help us manage stress well?

- Avoid smoking/ alcohol/ drugs. These are not medicines and always cause harm.
- Good eating habits to control over or undereating as well as quality of food.
- Develop good sleeping habit. Sufficient sleep of 6-7 hours is a must for brain to function well. Avoid spending late hours with cellphone or TV. Go to bed timely and regularly.
- Inculcate creative hobbies to boost health and activate mind such as painting, gym, sports, yoga, etc. Spend quality time with family and friends to keep off stress.
- Keep good company of positive, happy people and avoid people with negative thoughts, who always discourage or talk low-esteem.

11. What are the healthy working or study habits that help reduce stress?

Bring a schedule and plan in work and study. Consider time planning. Avoid procrastination.

- Do not try to please everyone. Learn to say no if you really cannot help something.
- Plan to keep a balance between work and family. For scholars, keep a study-recreation balance.
- Plan your breaks and holidays and try to enjoy them fully.
- Stick to your plans or timetables.
- Avoid over-work or over-study.

12. How can you say that sometimes eustress helps in counterbalancing distress?

In most of the cases, it is not possible or it is difficult to change your surroundings, environment, working conditions, school or college. We can still do certain things to adapt well in such case like taking nature walks or early morning walks to relax our mind and re-energise our body, going for vacations for a change of place and climate and return with boosted energy, adopting hobbies to boost your eustress and participating in community activities.

13. List some tips to manage environmental stress.

- Take nature walks or early morning walks to relax your mind and re-energise your body.
- Go for vacations for a change of place and climate and return with boosted energy.
- Adopt yoga, fitness training, activity club to boost your eustress.
- Participate in community activities that help in improving environment and surroundings like anti-pollution drive, swachhta abhiyaan activities etc.

14. Despite the importance of team work, how does the ability to work independently helps an individual? Give example.

Most of the tasks are accomplished through teamwork. But there are many cases where our ability to work independently is important. Working independently is not like working alone. Being able to work independently means accomplishing the tasks assigned to you without unnecessarily claiming the time of other people. For example, if you are a part of the Green Club team in your school which has planned to plant certain trees in a locality. You are assigned to collect funds for procuring seeds for 20 trees by next Sunday then no other team member should help you in this. It is something you need to do independently.

15. List some major traits of an individual able to work independently.

Ability to organise work as the needs arises.

- Personal integrity.
- Ability to handle multiple tasks efficiently.
- Self-awareness of abilities and limitations.
- Self-discipline and self-regulation.
- Communication skills.
- Ability to adapt to the changing situations.
- Handling failures and setbacks positively and responsibly.

16. Write a note on personal skills discussing their benefits.

Personal skills are self-developed by self-motivation. Personal skills help us to accomplish our tasks with our own efforts alone. This ability us to work independently in different ways such as organising our work, managing multiple tasks, being aware of our limitations and strengths, self-management and ability to handle failures. Personal skills give us efficiency to stand out in our performances.

17. How can we say that one is self-aware? Explain two types of self-awareness.

When we are aware of our strengths, weaknesses and beliefs etc. then it is called to be self-awareness.

Internal self-awareness: Our values, beliefs, passions and standards are discovered by internal self-awareness. These traits help us in adapting to our surroundings and environment. Internal self-awareness helps us determine our favourite subject, sports, our aspirations, likes, dislikes. Our attitude is determined on these values.

External self-awareness: Ability to assess other people's viewpoint about us is external self-awareness. It helps in self-improvement, honing good leadership skills, understand people and determine people's liking/ disliking about us. External self-awareness helps us deliver tasks in a better way.

18. What will you do to become self-aware?

To become self-aware, we must retrospect what we have done or achieved in past. We must become a good listener and ask people for feedback about ourselves and our work. We should think in terms of "what" instead of "why". For example, what could be the possible reasons that I tend to waste a lot of time instead of using it meaningfully.

19. What benefit do you draw by knowing your weaknesses and strengths?

Awareness about our weaknesses enables us to discover what we are not able to do. Accepting weaknesses and working to overcome them enhances our abilities and skills. Knowledge of our strengths helps us overcome our weaknesses and utilise the strengths suitably to achieve our goals.

20. How does self-awareness help in achieving self-motivation and self-regulation?

When we are aware of our weaknesses and strengths (self-awareness) then we can convert our thoughts into actions. This is also governed by self-regulation. In the beginning, every task seems too challenging to accomplish but careful

analysis shows us the way and plan to do it. We begin working on our weaknesses. This brings self-regulation and discipline by working on our emotional intelligence, anticipating obstacles and working to overcome them to reach the set goal.

Unit 3: Information and Communication Technology Skills – II

All Exercises are practical oriented.

Assessment

1. Define the term Operating System. List its 3 major functions.

Operating system is the system software that controls entire functioning of a computer system. It also acts as an interface between the user and the computer system.

Three major functions of an operating system are:

1. Managing applications and giving them access to hardware services.
2. Managing data and system resources.
3. Providing user interface to work with the computer system.

2. List some major operating systems of different types.

Single user OS – DOS, Multi-user OS – Unix, Windows, Real-time OS – Cocoon, Mobile OS – iPhone OS, Android, Distributed OS – Windows Server.

3. What do you mean by the terms Icons, Desktop and Taskbar?

Small pictures on the screen that denote a program are called icons. The screen that appears when operating system is loaded is called Desktop. Desktop is the basic component of GUI. Every part of GUI appears over the desktop. Usually, a horizontal bar at the bottom of the screen is called Taskbar. It contains Start button and various other buttons on it. It also displays information such as time and notifications etc.

4. What is the use of Computer Icon and Recycle Bin?

Computer icon is found in the desktop. It opens the Computer window which shows the drives, files and folders on the computer system. Recycle Bin icon is also found on the Desktop which opens Recycle Bin window. Deleted files are found in Recycle Bin from where either they can be permanently deleted or restored back.

5. How do you move or copy computer file from one location to another?

Easiest way to move or copy a computer file from one location to another is to first select the desire file and press Ctrl+C to copy or Ctrl+X to move (cut). Then, go to the destination location and press Ctrl+V to paste the file there.

6. How is a file different from a folder?

A file stores the data such as text, numbers or multimedia like picture, video, audio etc. Depending on the data they store, files are of different type such as simple text file, video file, audio file etc. Files are identified by their primary names and their types are identified by their extension names e.g., story.txt is a text file while house.jpg is an image file.

Folder stores files and other folders called sub-folder. Folders help in organizing our data on the computer. Folders are like sections of cupboard to keep different objects.

7. What is the difference between moving and copying a folder?

Moving the file (Ctrl-X to cut and Ctrl+V to paste) means that the same file is shifted to the new location. Copying the file (Ctrl-C to copy and Ctrl+V to paste) means the original file remains in its original location and its copy is created in the new location.

8. Why is it necessary to maintain your computer system regularly?

As we work on the computer system over the time, computer is loaded with the files we create and it takes more time to access the files on the disk. A lot of files created earlier become useless over the time. To tidy up the computer with necessary files organised properly on the disk, we need to maintain the computer. In addition to this, computers also need physical care such as regular cleaning, safety from dust and moisture etc. We also need to keep computer safe from harmful programs such as viruses and from unauthorized access when it is online.

9. What is the use of disk defragmenter and disk cleanup utilities?

Defragging means joining the pieces together. Computer stores larger files by breaking them into parts as the space is available on the disk. This makes the file access slower. To rearrange the files on the disk, we need defragmenter utility. Disk cleanup is useful to remove unnecessary clutter of files and data from the disks to make more space on the disk.

10. Why are regular backups of data important?

Computers are basically used to process data and to store it on the disks. If anything goes wrong with the computer system and it crashes due to any reason such as virus, electrical spike, accidental delete, data corruption, physical damage to the disk etc., then data can be restored if it has been backed up earlier. It is due to these reasons; we need to take regular data backups on a separate storage media.

11. What preventive measures should we take against computer viruses?

To prevent computer virus, we need to practice basic internet discipline such as avoiding opening untrusted emails and websites, use spam filters, use strong passwords etc. To protect the computer, we should take regular data backups and install updated antivirus and updated genuine operating system.

12. List any 5 symptoms of a computer virus.

5 common symptoms of a computer virus are slowed down computer speed, sudden system crash, sudden computer restart, programs responding too slowly and strange error messages.

13. List any 4 practices to keep your computer work smoothly for a longer time?

1. Keep the computer clean, safe from dust and handle the device carefully.
2. Ensure proper usage of the computer such as proper shutdown.
3. Regularly maintain computer by running computer maintenance utilities, anti-viruses and operating system updates.
4. Use genuine software and avoid accessing unknown resources, websites and emails when online.

14. List 3 types of viruses.

Boot sector virus, File virus and Macro virus.

15. How can you say that a computer is infected by some virus without running any antivirus?

Viruses corrupt the files and interfere in the proper functioning of the computer system. Some common symptoms that indicate the presence of viruses on a computer are slowed down computer, computer taking too long to start, strange, unwanted files created, files renamed or deleted on their own, strange notifications and messages pop-up, programs taking too long to respond, storage media seems busy for a longer duration etc.

Unit 4: Entrepreneurial Skills-II

SESSION 1: Characteristics of an Entrepreneur

Exercise

1. How entrepreneurs positively contribute to society?

Entrepreneurs do a lot of good to the society. They earn money with great struggle and pay taxes thereby returning back to the economy. They take green initiatives for sustainable development and use resource efficiently for the sake of society.

Entrepreneurs help enhance the living standards of community. They create employment and their innovations help improve the quality of life of all the stakeholders such as employees and customers.

Entrepreneurs are self-employment. They grow their business to provide more job opportunities and address the problem of unemployment up to some extent.

2. List main characteristics of an entrepreneur.

Entrepreneurs are great planners. They possess remarkable confidence. They are creative, risk takers, and professional in their approach. They are innovative thinkers and are always open to challenges. They know how to deal with failures. They have social and leadership skills. They are a passionate people.

3. What are the main functions of an entrepreneur?

Management: Predicting outcomes, planning various operations, organising, coordinating and controlling the team, monitor various functions and perform interactions with employees and customers.

Sales and Promotion: It deals with earning revenues and developing business relations. Dealing effectively with customers, promoting the innovative product and creating sales strategies.

Finance and Commerce: Identifying sources of funding and associating with prospective investors. Commercial functions include monitoring various operations of the business such as production, manufacturing, service delivery etc. Participate in financial transactions, analysing the financial figures and plan ahead.

SESSION 2: Role and Significance of an Entrepreneur

Exercise

1. How do entrepreneurs enhance living standard of people and create jobs?

Entrepreneurs play a key role in increasing the standard of living in a community. They create jobs and also develop and adopt innovations leading to improved quality of life of their employees, customers, and other stakeholders in the community.

Entrepreneurs create opportunities for jobs. They take risks of self-employment. As their business grows, opportunities for more jobs are created. This greatly contributes to the eradication of unemployment problem in the nation.

2. How do entrepreneurs contribute to industrial development and economical growth?

Entrepreneurs setting up new businesses and industrial units help with regional development by locating in less developed and backward areas. The growth of industries and business in these areas leads to infrastructure improvements like better roads and rail links, airports, stable electricity and water supply, schools, hospitals, shopping malls and other public and private services that would not otherwise be available.

India's MSME sector, accounts for over 35% of the country's GDP by making use of resources like land, labour and capital that add to the national income, national product and per capita income of the country.

3. How do entrepreneurs mobilise public wealth and contribute to society?

By establishing the business entity, entrepreneurs invest their own resources and arrange for capital and investments. The source of funding may be investors, lenders and the public. This mobilizes public wealth and benefits people as well as all stakeholders in the form of the success of the growing business. This kind of contribution of funds from different sources makes the foundation on which the business entity is erected.

Entrepreneurs often do more for the greater good than the average person. They make honest money with great struggle and pay for taxes and public services thereby contributing and returning to the economy. Many of them take green initiatives for environment and contribute to the charities for social causes.

4. How can society contribute to entrepreneurship drive?

View of society towards entrepreneurship is important. Society's initiative can help greatly in entrepreneurship drive. Social ecosystem has youth power to encourage them for entrepreneurship as a career option. With governments help, rural areas can be made aware to adopt entrepreneurial initiative. Local educational institutions and government office can play important role in promoting entrepreneurship.

SESSION 3: Myths Related to Entrepreneurship

Exercise

1. Do you think entrepreneurship is easy? Why/ Why not?

No. Entrepreneurship involves greater risks. Conceiving an innovative service or product is challenging in itself. Then convincing people of your idea and mobilising funds also needs a lot of efforts. Making the service/ product reach the masses and get accepted is another barrier to scale. At every step there are new kind of challenges.

2. Entrepreneurs have a time-bound schedule. Do you think this statement is true? Why/ Why not?

Yes. An entrepreneur walks, talks, eats and sleeps his/her dream. They do not have the time-bound schedule of an employee. They also do not have luxury to hire a big team that works for them. They are actively involved in all processes of their venture so there is no time-bound schedule for them. They have luxury of flexibility but idea of freedom is a big myth.

3. Is it a myth that every start-up should begin with a new product or service?

Entrepreneurs do the things differently or innovatively. As an entrepreneur if you have a new product to offer, it is good but most start-ups have found innovative and creative ways in offering the same products and services. This is called disruption. Paytm, Uber, Ola etc. are disruptions.

4. Do start-ups need a huge amount of funds to begin? Explain.

One aspect of innovation is thinking of an idea which can be launched at a smaller scale that can start with a small amount. At later stages, it can be scaled up to bigger product and using more funds as it would be easier to do so once brand is established in the market. Most of the start-ups begin at small scale, home based ventures.

SESSION 4: Entrepreneurship as A Career Option

Exercise

1. **Find some good entrepreneurship course on internet. Make a small write up about them and the institutes that provide these courses.**
Students should devise this answer themselves as instructed in the question.
2. **Go to entrepreneur.com, business.com and franchise.com and spend some time there to find out what sorts of business opportunities are there for youth.**
Students should devise this answer themselves as instructed in the question.
3. **List a few advantages of entrepreneurship.**
Some common advantages of having entrepreneurship as career are:
 1. Control: You plan, chose and design the things the way you need or like.
 2. Excitement: Each day brings its own challenges, opportunities, risks and rewards.
 3. Flexibility: Working hours can be planned as per the required work and commitments.
 4. Freedom: In terms of location, timings and team building there is comparatively more freedom.
 5. Recognition: Once business grows, people begin to recognise you and get inspired by you.
 6. Growth: You can determine the pace of start-up's growth as you require.
4. **List a few disadvantages of entrepreneurship.**
Some common disadvantages of having entrepreneurship as career are:
 1. Competition: You need to be on constant lookout to update yourself on the competition in market.
 2. Lone struggling: Entrepreneurs are normally a small team. Struggle is not contributed by many stakeholders. Mostly risk taking lies on the entrepreneur him or herself.
 3. No regular income: Income in business is not predictable. It directly relates to your efforts and revenues earned.
 4. Greater responsibilities: As an entrepreneur you own everything so you shoulder the bigger responsibility of all the processes and functions in your business.
 5. Longer working hours: There are no fixed hours and days for an entrepreneur. He/ she eats and sleeps the business. They always think what new can be added for further growth.
 6. Funding and finances: If business goes down, managing new finances could be difficult.

Assessment

1. **What do you mean by characteristics of an entrepreneur?**
Entrepreneurs are some of the world's most powerful transformers. Elon Musk, Bill Gates, Steve Jobs are entrepreneurs who imagine the world differently.

Entrepreneurs know what they wish to achieve and they have a plan to achieve it. They are creative. Creativity causes innovations. Innovative ideas come out of the box thinking and the base of it is creativity. They take risks. They are skilled in social interactions and open to knowledge, learning and failures. Entrepreneurs like to work with democratic teams. Entrepreneurs resolve conflicts and recognise the good achievements. They are customer oriented and passionate. If they meet the failures, they look for what had gone wrong and how it could be corrected. Then, they set on with even more passion to retry. Entrepreneurs are leaders. An entrepreneur leads by example and for customers he demonstrates a code of ethics which are qualities of a leader.
2. **How can you say that 'innovation' sets the entrepreneurs apart from businessmen?**
Creativity is a basic skill of an entrepreneur. Creativity brings innovation. Entrepreneurs look around and observe the problems prevailing in the society. Then they think of a viable and innovative solution for that problem. The solution is built up in a planned way and sold to the target customers. The funds are arranged by loans or investors. In this approach of functioning entrepreneurs are different from businessmen. Businesses are launched with investments and creating a product which could be in demand and manufactured by others also. Business do not opt for innovations necessarily.
3. **List the functions of an entrepreneur.**
Management, sales and promotion, Finance and commerce.
4. **Discuss in brief any 3 major functions of entrepreneur.**

Management: Predicting, planning, organising, coordinating and controlling the team, functions and interactions.

Sales and Promotion: It influences the processes of bringing in revenues and developing business relations. Addressing the customer segment and promoting the innovative product, devising promotional strategy and activities are one of the prime concerns of an entrepreneur.

Finance and Commerce: Identifying sources of funding and getting prospective investors. Commercial functions include looking into production and manufacturing process or the processes related to service delivery. Involving into financial transactions, analysing the financial figures and plan ahead.

5. How does entrepreneurship influence society and nation's growth?

By their nature and motivation entrepreneurs are job creators. This kind of job creation by new businesses is very rewarding for nation's economy as it addresses problem of unemployment up to some extent.

Entrepreneurs set up new businesses and industrial units in less developed and backward areas. The growth of industries and business in these areas leads to infrastructure improvements like better roads and rail links, stable electricity and water supply, schools and other public and private services. Entrepreneurs play a key role in increasing the standard of living in a community. They develop and adopt innovations leading to improved quality of life of their employees, customers, and other stakeholders in the community. Entrepreneurs make honest money with great struggle and pay for taxes and public services thereby contributing and returning to the economy. Many of them take green initiatives for environment and contribute to the charities for social causes.

6. List any 4 major myths about entrepreneurship.

1. Entrepreneurship is easy to do.
2. You have more freedom in entrepreneurship.
3. You need to create an entirely new product or service to sell.
4. Lot of funding is required to start the business.

7. Discuss about any 3 myths related to entrepreneurship.

Myth: Entrepreneurship is easy to do

Fact: Conceiving an innovative service or product is challenging in itself. Then convincing people of your idea and mobilising funds also needs a lot of efforts. At every step there are new kind of challenges.

Myth: You have more freedom in entrepreneurship

Fact: An entrepreneur does not have the time-bound schedule. They are actively involved in all processes of their venture so there is no time-bound schedule for them. They have luxury of flexibility but idea of freedom is a big myth.

Myth: You need to create an entirely new product or service to sell.

Fact: Entrepreneurs do the things differently or innovatively. As an entrepreneur if you have a new product to offer, it is good but most start-ups have found innovative and creative ways in offering the same products and services. This is called disruption. Paytm, Uber, Ola, Netflix, Savn, Olx etc. are disruptions.

8. Write a brief note on how entrepreneurship can be a good career option.

Entrepreneurship is a vast field providing several opportunities and choices to make from. You can begin your own start-up with an innovative idea or you can associate with an existing start-up and contribute to its growth.

As a career it is suitable for people who work independently. They are passionate and ambitious. They believe in their ability to generate wealth for self and opportunities to earn and grow for others.

Today various short-term and fulltime entrepreneurship courses are available which can be pursued to prepare before actually starting with a start-up. Universities and private management institutes provide a range of courses to choose from. These courses prepare you with necessary skills and knowledge required to become an entrepreneur.

Many business follow up franchising framework to grow their business. Advantages of taking a franchisee of a business that you save a lot of time and effort in establishing the business. As a franchisee you get a ready setup.

Instead of thinking and deploying a new idea, an existing business can be bought which has growth potential in future and then innovations can be added to it to give it a new shape.

Unit 5: Green Skills-II

SESSION : Understanding Sustainable Development

Exercise

- 1. Define the term sustainable development.**
Sustainable development means the economic development that is achieved without harming and depleting natural resources. Sustainability is development that takes care of the needs of the present while being concerned about future generations, balancing between economic growth, care for the environment and social well-being.
- 2. What are the 3 fundamental components or pillars of sustainable development?**
The three fundamental components to sustainable development are Economic development, Social development and Environmental protection. Economic development is about providing incentives for businesses and other organizations to adhere to sustainability guidelines. Social development is about awareness and protection of the health of people from pollution and other harmful activities of business. Environmental protection is the need to protect the environment.
- 3. What are the 4 Ps of sustainable development? Explain them briefly.**
Sustainable development encompasses 4 Ps: People who represent the socio-cultural issues. Planet which represents the environmental issues. Profit that represents the economic issues. Policy which refers to visionary political leadership and implementation of policies needed to make sustainable development a reality. Today, countries are agreeing to the importance of conserving natural resources. Process is slow but has begun. People are adopting to greener ways that will improve their health, farmers are practicing smart agriculture and industries are realizing as to how much they can save through energy efficiency.
- 4. What is UN's sustainability development program 2030?**
On 1 January 2016, the 17 Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development — adopted by world leaders in September 2015 at an historic UN Summit — officially came into force. Eradicating poverty in all its forms and dimensions is an indispensable requirement for sustainable development. There must be promotion of sustainable, inclusive and equitable economic growth, creating greater opportunities for all, reducing inequalities, raising basic standards of living, fostering equitable social development and inclusion, and promoting integrated and sustainable management of natural resources and ecosystems.
- 5. Go to <https://www.un.org/sustainabledevelopment/sustainable-development-goals/> and read more about UN's SDGs.**
To be done by students practically.

SESSION 2: Importance of Sustainable Development

Exercise

- 1. Why sustainable development is necessary?**
Sustainable development is necessary because it will provide for essential human needs. Sustainable development promises to reduce struggle for basic necessities by growing population.
It addresses agricultural requirement. Sustainable development focuses on sustainable agricultural methods such as effective seeding techniques and crop rotation to promote high yields while maintaining the integrity of the soil, which produces food for a large population.
Climate change can be mitigated by sustainable development practices. Renewable energy sources like solar energy and nuclear energy are the better options.
Sustainable development practices have the ability to create more financially sustainable economies through renewable forms of energy.
Sustainable development practices encourage the use of renewable energy resources, and organic farming practices that are environment friendly.

2. Discuss some examples of sustainable development.

India as a responsible country has taken some environmental friendly initiatives as below:

1. India earlier followed Kyoto protocol to fight climate changes and signed Paris agreement focusing on bringing down global temperatures.
2. India is second highest in the world, after China, in running 1500+ projects in energy efficiency, fuel switching and solid waste management.
3. Climate change programs focusing on water, agriculture, tourism, transport and forestry etc. are run in 32 states and union territories.
4. India levies carbon tax on industrial coal usage. Clean energy initiatives and research is funded under National Clean Energy fund created by this tax.
5. A huge fund has been provisioned to take care of the areas which are vulnerable to the adverse effects of climate and environmental changes.

SESSION 3: Sustainable Development: Challenges and Solutions

Exercise

1. List some common challenges in sustainable development.

Climate changes, energy usage, border conflicts, hunger and malnutrition, corruption, rapid urbanisation, lack of vision and policy.

2. Discuss briefly why sustainable development is a challenge for developing countries?

Achieving sustainable development requires global as well as local actions.

Global warming, floods, droughts, extreme winters and summers in many parts of the world create a barrier in achieving goals associated with sustainable development. Hunger and malnutrition in many countries is on priority than sustainable development.

War and border conflicts among countries shift the focus away from the priority of sustainable development. To accommodate the growing population due to decreased death rates, more and more agricultural lands and forests are converted into urban areas and cities.

Use of fossil fuel and coal needs to be minimised.

Many countries struggling with their economic crises find it difficult to mobilise funds for sustainable development. Corruption is the biggest impediment in the way to achieve sustainable development. Businesses and industries, for their vested interests, resort to every unfair mean to carry on with their profit programs.

Certain small, underdeveloped countries do not know how to approach towards gaining sustainable development. This gap in the vision delays the development process and more damage is done meanwhile.

3. What are the ways to overcome the challenges in the way of sustainable development?

Integration of economic, social and ecological dimensions brings in sustainable development. Let us look at the ways to overcome the challenges in sustainable development.

1. A stable, dedicated and fair government is a must for paving the ground for sustainable development programs.
2. Entrepreneurs working for the betterment of society and coming up with innovative ideas should be promoted and supported.
3. Equal opportunities for employment.
4. Renewable energy consumption.
5. Control of environmental abuse. Strict and stringent laws and their strict implementation against poaching, illegal mining, exploitation of forests and rivers, oil spillage in oceans and harvest stubble burning etc.
6. Community mobilisation through awareness programs using mass communication.
7. Reforms in education sector.
8. Eradicating and controlling diseases and malnutrition.
9. Countries like Singapore, Sweden, Netherlands and South Korea have done remarkable innovations in sustainable development. Their achievements can be studied and adopted suitably to achieve the same success.
10. Gender equality and poor women upliftment.

4. What are some initiatives by India towards sustainable development in the country?

India as a responsible country has taken some environmental friendly initiatives as below:

1. India earlier followed Kyoto protocol to fight climate changes and signed Paris agreement focusing on bringing down global temperatures.
2. India is second highest in the world, after China, in running 1500+ projects in energy efficiency, fuel switching and solid waste management.
3. Climate change programs focusing on water, agriculture, tourism, transport and forestry etc. are run in 32 states and union territories.
4. India levies carbon tax on industrial coal usage. Clean energy initiatives and research is funded under National Clean Energy fund created by this tax.
5. A huge fund has been provisioned to take care of the areas which are vulnerable to the adverse effects of climate and environmental changes.

Assessment

1. What do you mean by environment?

Our environment is everything that surrounds us- from the trees, mountains, roads, buildings, things and even people. It is a combination of both natural and human-made elements.

Community of living and non-living organisms living interdependently with each other is called ecosystem. like, Forest, Pond etc. An ecosystem is a dynamic entity with constant interactions occurring among the organisms and with the surroundings.

2. Which components is our environment made of?

Our environment is mainly made of the lithosphere - the hard top layer of the earth, the Hydrosphere - various sources of water and different types of water bodies, the atmosphere - the thin layer of air that surrounds the earth and the biosphere that includes all life.

3. What is Ecosystem?

Community of living and non-living organisms living interdependently with each other is called ecosystem. like, Forest, Pond etc. An ecosystem is a dynamic entity with constant interactions occurring among the organisms and with the surroundings.

4. Give an example of an ecosystem and briefly explain it.

An ecosystem is a dynamic entity with constant interactions occurring among the organisms and with the surroundings. In a garden various plants, insects like bees and butterflies, microorganisms in soil and air together constitute the ecosystem of the garden.

5. List any 5 disastrous effects on environment caused by human activities.

Pollution, deforestation, global warming, climate change, rapid urbanisation.

6. What is the importance of green economy in the modern world?

The Green Economy is an alternative vision for growth and development and sustainable development. Green Economy can promote safer economic, environmental and social well-being. Green economy addresses low carbon emissions, efficient use of resources, and social benefits. Green economy improves social well-being, equity and reduces environmental risks. It is a viable alternative to today's economic structures, which encourage waste and threats to the environment. The concept of the green economy is emerging as a priority for government for sustainable and environment-friendly growth.

7. What is sustainable development? How is it different from traditional way of development?

Sustainable development means the economic development that is achieved without harming and depleting natural resources. Traditional ways of development generally are not concerned about future generations, balancing between economic growth, care for the environment and social well-being.

8. Describe the 3 fundamental components or pillars on which sustainable development is based.

The three fundamental components to sustainable development are Economic development, Social development and Environmental protection. Economic development is about providing incentives for businesses and other organizations to adhere to sustainability guidelines. Social development is about awareness and protection of the health of people from pollution and other harmful activities of business. Environmental protection is the need to protect the environment,

whether the concept of 4 Rs (reduce, recycle, recover, and reuse) are being achieved or not.

9. What do the 4 Ps represent in sustainable development?

Sustainable development encompasses 4 Ps: People who represent the socio-cultural issues. Planet which represents the environmental issues. Profit that represents the economic issues. Policy which refers to visionary political leadership and implementation of policies needed to make sustainable development a reality. Today, countries are agreeing to the importance of conserving natural resources. Process is slow but has begun. People are adopting greener ways that will improve their health, farmers are practicing smart agriculture and industries are realizing as to how much they can save through energy efficiency.

10. Write a note on the 2030 Agenda for Sustainable Development of UN Summit discussing briefly about its 17 sustainable development goals.

On 1 January 2016, the 17 Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development — adopted by world leaders in September 2015 at an historic UN Summit — officially came into force. Eradicating poverty in all its forms and dimensions is an indispensable requirement for sustainable development. There must be promotion of sustainable, inclusive and equitable economic growth, creating greater opportunities for all, reducing inequalities, raising basic standards of living, fostering equitable social development and inclusion, and promoting integrated and sustainable management of natural resources and ecosystems.

11. How is sustainable development beneficial for the economy, society and environment of a nation? Discuss briefly.

Sustainable development is necessary because it will provide for essential human needs. Sustainable development promises to reduce struggle for basic amenities by growing population. It addresses agricultural requirement. Sustainable development focuses on sustainable agricultural methods such as effective seeding techniques and crop rotation to promote high yields while maintaining the integrity of the soil, which produces food for a large population. Climate change can be mitigated by sustainable development practices. Renewable energy sources like solar energy and nuclear energy are the better options. Sustainable development practices have the ability to create more financially sustainable economies through renewable forms of energy. Sustainable development practices encourage the use of renewable energy resources, and organic farming practices that are environment friendly.

12. How the problems of climate change, hunger and degrading biodiversity addressed by sustainable development approach?

Climate change can be mitigated by sustainable development practices which discourage the use of fossil-based sources of fuel. Renewable energy sources like solar energy and nuclear energy are the better options.

Sustainable development practices have the ability to create more financially sustainable economies. Developing countries that cannot access fossil fuels can opt for renewable forms of energy to power their economies. The growing population compels people to struggle for the limited life essentials like food, shelter, and water. Sustainable development can reduce this by renewable and sustainable options.

Life ecosystem is designed in such a way that species depend on one another for survival. Sustainable development practices encourage the use of renewable energy resources, and organic farming practices that are environment friendly.

13. What are the common modern problems which stand as a challenge in the way of sustainable development?

Climate changes, energy usage, border conflicts, hunger and malnutrition, corruption, rapid urbanisation, lack of vision and policy.

14. Suggest a few ways to meet the common challenges of sustainable development.

A stable, dedicated and fair government is a must for paving the ground for sustainable development programs.

Entrepreneurs working for the betterment of society and coming up with innovative ideas should be promoted and supported.

Equal opportunities for employment.

Renewable energy consumption.

Control of environmental abuse. Strict and stringent laws and their strict implementation against poaching, illegal mining, exploitation of forests and rivers, oil spillage in oceans and harvest stubble burning etc.

Community mobilisation through awareness programs using mass communication.

Reforms in education sector.

Eradicating and controlling diseases and malnutrition.

Countries like Singapore, Sweden, Netherlands and South Korea have done remarkable innovations in sustainable development. Their achievements can be studied and adopted suitably to achieve the same success.

Gender equality and poor women upliftment.

Subject Specific Skills

Unit 1: Digital Documentation (Advanced)

All Exercises are practical oriented.

Assessment

A. Select the correct option. – 1 Marks each.

- | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|
| 1. B | 2. A | 3. B | 4. C | 5. B | 6. D | 7. A |
| 8. C | 9. C | 10. B | 11. A | 12. B | 13. B | 14. A |
| 15. C | 16. B | 17. B | 18. A | 19. C | 20. C | |

B. Answer the following questions. – 2 Marks each.

1. Briefly discuss the benefits of document styles.

Styles bring uniformity and consistency in the design of the document, save time and effort, document gets a formal look, documents load faster in computer memory.

2. How are styles different from templates?

Styles keep the look and design of the text within a document. Templates are used to apply consistent styles and formatting across different document. Every new document is based on a template.

3. List any 4 types of styles.

Paragraph styles affect an entire paragraph.

Character styles affect a block of text inside a paragraph.

Page styles affect page formatting (page size, margin, and the like).

Frame styles affect frames and graphics.

4. Write the steps to apply a paragraph style to a part of text.

Select the desired text > click on Paragraph style button in Styles and Formatting panel in Sidebar and double click on desired style.

5. How will you apply formatting of some text to other multiple pieces of text quickly and easily?

Select the source text then click on Fill Format Mode button and then click on the desired text parts to apply the style one by one. Finally, press Escape to come out of Fill Format Mode.

6. Anita designs school magazine. She has formatted some nice text samples. She wants them to be available as new styles in her document. Help her with the steps.

Select the text whose style has to be saved. Click on New Style from Selection button on the Formatting toolbar. Create Style popup appears. Mention a relevant name of your style and click OK.

7. How will you load a style from a template?

Click on Styles actions drop-down in the Styles pane of Sidebar > Load Styles option.

In Load Styles popup, select the desired style under various Categories and click OK.

8. How do shapes and images help in enhancing the content?

Shapes and images are useful in presenting the content in appealing manner. With images, concepts are explained with lesser words. Shapes are useful in making diagrams and illustrating the ideas in a better way.

9. List any four distinct categories of shapes in a word processor.

Basic shapes, Callouts, Block arrows, Flowchart

10. List any 4 common ways of inserting images in a document (do not write the steps).

Insert the picture, link the image with document, copy from clipboard, drag-drop image in the document.

11. List any four common operations which can be done on an image.

Crop, resize, rotate, flip.

12. What is text wrapping?

Arrangement or distribution of text around an image is called text wrapping such as optimal, through etc.

13. Which common properties of a line can you set?

Line style, line colour, line arrow style, line width.

14. Name various Area style filling options for a shape.

Color, Gradient, Bitmap, Pattern, Hatching.

15. How is skew shape different from rotate shape?

In skew, image is tilted vertically or horizontally and loses its original shape while in rotate, image is rotated on its central axis and its shape remains intact.

16. How will you group and ungroup graphical objects?

Select the desired objects using Shift key. Then click Group button on the Drawing Object Properties toolbar.

To ungroup the objects, select the grouped objects and click on Ungroup button on the Drawing Object Properties toolbar.

17. List the names of four image modes.

Default, grayscale, black and white, watermark.

18. What is an image filter? List the names and functions of any four image filters.

Filters are certain special effects that can be applied on an image to give it a completely different look.

Some filter names are Invert, Smooth, Sharpen and Mosaic.

19. What do you mean by a template? What is a default template?

A template is a pre-designed and pre-formatted document which can be used to fill in the content as you need. Template saves time and effort that otherwise goes in designing and formatting the document manually. New documents are based on the default template.

20. What is a ToC? What is its significance?

A table of contents (ToC) contains the numbered list of topics in a document and the page number on which they are located. By referring to ToC, reader can easily access various topics in a document. In the soft copy of the document, each entry in the ToC functions as an internal hyperlink to the topic content for easily jumping to the topics.

21. What does Synchronise content option do while working with labels?

This option allows to reflect the changes in one label to all the other labels.

22. What do you mean by mail merge? What is the role of a data source in mail merge?

Mail merge allows generating copies of same document for multiple recipients with the variable fields inserted in each copy. Values for these variable fields come from a document called data source.

23. What is the advantage of mail merge?

We can generate multiple copies of the document for different recipients with least time and effort automatically.

C. Answer the following questions – 3 marks each.

1. Discuss briefly any two document style types.

Paragraph styles affect an entire paragraph. They include various styles such as Appendix, Bibliography etc.

Page styles affect page formatting such as page size, page margins etc.

2. How will you do the following?

a. Create a new style.

Select the source text > Formatting toolbar > New Style from Selection button.

b. Load style from a template.

Click on Styles actions drop-down in the Styles pane of Sidebar and select Load Styles option.

In Load Styles popup, select the desired style under various Categories and click OK.

c. Scan and insert an image in the document.

Scan the image by Insert menu > Picture > Scan option > Select Source > OK. Then insert the scanned image using Insert menu > Picture > Scan > Request option.

(7.1.2.2 & higher versions: Insert > Media > Scan > Request)

d. Apply a bitmap fill in a shape.

In the Properties panel in the Sidebar > Area section > Color drop-down > Bitmap.

e. Make an image 50% transparent.

In Image toolbar, change transparency value in the Transparency counter.

- | | |
|--|--|
| <p>f. Turn an image into a watermark.</p> <p>g. Sharpen the pixels of an image.</p> <p>h. Create a new template and then set as default template.</p> <p>i. Install a template from internet.</p> <p>j. Change a template manually.</p> <p>k. Create a table of content and apply a style on it.</p> | <p>In Image toolbar, select image mode as Watermark.</p> <p>Image toolbar > Image Filters drop-down > Sharpen filter.</p> <p>File menu > Templates > Manage Templates option.
In the Templates dialog box, open the category containing the template that you want to set as the default, then select the template. Right-click on the selected template and click the Set as default option.</p> <p>Click Extensions button at the bottom of Templates dialog box. In the popup, click on the link website beside the desired template. It will take you to the download page of that template. Download and save the template.</p> <p>In the Templates dialog, double-click the template you want to use. Delete any unwanted content from it and save the document but keep it opened. Open the document you want to change, select everything in this document and copy the contents. Go to the new document created in step 2. Paste the contents into this new document. Save the new document.</p> <p>Insert > menu > Table of Contents and Index > Table of Contents, Index or Bibliography option. In the dialog box, in Title tab, specify the title of the table, specify the number of levels of headings as required. Click OK</p> <p>To customise a ToC, right click on it and select Edit Index option. In the dialog box, go to Styles tab. Select level in Levels list and a style in Paragraph Styles list. To change the style, click on Edit button below the Paragraph Styles list. In Paragraph Styles dialog box, change style such as font colour and click OK. Click on Assign button. Click OK.</p> |
|--|--|
3. Discuss the different ways in which text can be wrapped around an image or a shape.
 - i. None: The text remains as it is above and below the object.
 - ii. Parallel: The text flows around the object.
 - iii. Optimal: Optimal Page Wrap prevents text from being placed to the side of the image if the spacing between the image and the margin is less than 2 cm.
 - iv. Before: The object is placed to the right side of the text.
 - v. After: The object is placed to the left side of the text.
 - vi. Through: The object floats over the text and hides the text.
 4. Sumit has created some of his own templates saved on his computer. How can he bring them in his document?
While saving ODF Text Document template as .ott file, you can save your template anywhere or in application template folder. You can find the path to the templates by going to Tools menu > Options option > LibreOffice > Paths category.
 5. What does a Template Changer do?
Template changer is an extension in Writer that can be used to create permanent changes in the document templates.
 6. Explain the terms – Main document, data sources, merged fields, merged document.
Main document contains the common contents to be sent to each recipient. In this data is merged from data source.
Data source contains the variable data with the fields and acts as a source of data for merging with main document.
Merged fields are inserted in the main document at the point where data from the data source needs to appear.
Merged document is the final output of mail merge that contains all the merged documents to be sent to the recipients.

D. Answer the following questions – 5 marks each.

1. What is a style? How is it different from a template? Discuss any 3 types of styles.

Styles are a pre-designed set of font, font-size, colour and other formatting which can be applied on the document at once without having to format various parts of the content individually. A standard word processor provides a library of pre-defined styles to apply on the document in order to give it a professional look with least efforts.

Styles bring uniformity and consistency in the design of the document. They save time and effort as we can create and save our own defined styles.

Styles keep the look and design of the text within a document. Templates are used to apply consistent styles and formatting across different document. Every new document can be based on a template. With templates, we can reuse the settings of a document.

- i. Paragraph styles affect an entire paragraph. They include various styles such as Appendix, Bibliography etc.
- ii. Page styles affect page formatting such as page size, page margins etc.
- iii. List styles are used to apply various formatting styles on bullets and numbering.

2. How will you create a new style and update an existing style with new changes.

You can format some text as you like or need and then save that formatting as a new style for later use. To do so, do any of the following:

- i. Click on New Style from Selection button on the Formatting toolbar. Or,
Styles menu > New Style from Selection option. Or,
Click on Styles actions drop-down in the Styles pane of Sidebar and select New Style from Selection option.
- ii. Create Style popup appears.
- iii. Mention a relevant name of your style and click OK.
To update existing style:
Click on Update Selected Style button on the Formatting toolbar. Or,
Style menu > Update Selected Style option. Or,
Click on Style Action drop-down in the Styles pane of Sidebar and select Update Selected Style option.

3. What are the various ways if inserting image in a document?

In Writer, images can be inserted in following ways:

- i. Import graphics files using Insert menu > Picture > From File option. (higher versions: Insert > Image)
- ii. Link image by Insert menu > Picture > Link option or embed image by breaking the link as Edit menu > Links option and click Break Link button in the Edit Links dialog box.
- iii. Scan the image by Insert menu > Picture > Scan option > Select Source > OK. Then insert the scanned image using Insert menu > Picture > Scan > Request option. (higher versions: Insert > Media > Scan > Request)
- iv. Insert any copied image from the clipboard by using Edit menu > Paste Special option.
- v. Drag-dropping images in the document with Ctrl key (images are embedded in the document.)
or, Ctrl+Shift key (a link to the image is inserted in the document. Actual image is not inserted.)

4. Discuss various text wrapping options around an image.

Text wrapping options determine how the text around the inserted shape or object should be arranged. There are following ways a text is wrapped around an object:

- i. None: The text remains as it is above and below the object.
- ii. Parallel: The text flows around the object.
- iii. Optimal: Optimal Page Wrap prevents text from being placed to the side of the image if the spacing between the image and the margin is less than 2 cm.
- iv. Before: The object is placed to the right side of the text.
- v. After: The object is place to the left side of the text.
- vi. Through: The object floats over the text and hides the text.

5. What do you mean by image modes? How is it different from image filter? Discuss with example.

Image mode modifies the look of image in following ways:

- i. Grayscale: Image pixels turn into various intensities of Gray.
- ii. Black and White: Image pixels are converted into either white and black colours.
- iii. Watermark: The intensity of the image pixels is lowered so much that image fades out.

- On the other hand, image filters are certain special effects that can be applied on an image to give it a completely different look. Filter button on the Drawing toolbar provides various filters. Some filters are Sharpen that increases the image sharpness and makes it clearer, Poster size – reduces number of colours and gives image a look of a poster, Invert – reverses the colours in the image.
- 6. How will you apply basic formatting on a shape (line and fill)?**
- While working with any shape and image, the properties of the selected object can be viewed and changed in the Properties panel in the Sidebar (Ctrl+F5).
- Line style: This can be selected for lines and outline of a shape. Line width and line colour can be set using Line width and Line Color buttons.
- Area style/Filling: This is a list of various styles in which a colour or pattern can be filled in the shape. E.g. Bitmap, Pattern etc.
- Colour can be filled in the object using Fill Color colour box.
- 7. What do you mean by rotating, cropping and resizing an image?**
- Rotating object: The Rotate button on the Drawing Object Toolbar helps in rotating and skewing the object. Rotation means turning around the object on its central axis by holding it with corner handles. Skewing means changing the shape of the object by stretching it across horizontally or vertically by holding the handles on its margins.
 - Cropping Image: Cropping is the way to remove unwanted part of the image starting from its outer edges. To crop the image, select it and click Crop button on the Image toolbar. 8 handles will appear around it. Grab any handle with the left mouse click and drag to inwards to crop the image.
 - Resizing image: To resize an object, select it. 8 handles will appear around it. Grab any handle with the left mouse click and drag to resize the object.
- 8. What is the significance of a template? How will you create a new template?**
- A template saves you time and effort as it contains all the formatting and design already applied in it. You just need to enter your content and arrange it as you require.
- Writer provides a rich library of templates like resume, CV, Modern, MediaWiki,
- To create a template, first, create a well formatted document which you need frequently. For example, a colourful newsletter. Then, click on File tab > Save As option.
- In the dialog box, enter the name by which you wish to save the template.
- Click on Save as type: drop down list and select ODF Text Document template. Finally, click on Save button.
- The Writer template document will be saved as .ott file.
- You can save your template anywhere or in application template folder. You can find the path to the templates by going to Tools menu > Options option > LibreOffice > Paths category.
- 9. Describe the process of updating a document with a changed template.**
- If you have changed a template and if you open a document that was based on that template earlier then a confirmation message is displayed. You can select Update Styles to apply the changed styles in the template to the document or Keep Old Styles if you do not want to apply the changed styles in the template to the document.
- Suppose that Sample_Template1.ott file had blue text and Sample_Doc1.odt was based on it. Then Sample_Template1.ott was changed to Red and Green text. Later when Sample_Doc1.odt will be opened, the confirmation to update template styles is displayed. You can decide to update document with new template styles or keep the old style.
- 10. How will you set, deactivate, reactivate and cut link from a template with the document?**
- File > Templates > Change template (current document). Remember that changes made to the templates using Template Changer are permanent and cannot be undone once saved.
- Using Template Changer, you can select following options:
- Set a template to replace the earlier template on which your document is based.
 - Deactivate link to template so that template remains linked with the document but any changes in it will not affect the document.
 - Reactivate link to template to revert deactivation.
 - Cut link to template completely so that your document is not based on any template.
- 11. How will you create a table of content with 3 levels of headings with impact font, light blue fill area colour?**
- Go to Insert menu > Table of Contents and Index > Table of Contents, Index or Bibliography option.

In the dialog box, in Title tab, specify the title of the table and in Evaluate up to level: control, specify the number of levels 3.

To change the style, click on Edit button below the Paragraph Styles list.

In Paragraph Styles dialog box, change style such as font colour and click OK.

Click on Assign button.

You can go to Area tab and select light blue colour for fill area.

Finally, click OK in the dialog box.

12. Taking a small example, explain the standard process of mail merge briefly.

A book store needs to send new year greetings letters to all its customers in various cities. They have the address details of all the customer. They can use mail merge feature to do this.

Prepare main document: First of all, the main greeting letter is drafted with common content. The blank spaces will be left in it to insert the name and address of the customers.

Prepare data source: The names, address, city, pin and contact number of the customers will be arranged in a table in separate document and saved by the name Customer.odt.

Setup Data Source: Go to File menu > Wizard > Address Data Source option

In the wizard, select "Other external data source" > Click Next > Settings button > Select Database Type as Writer Document > Click Next > Browse and locate Customer.odt > click Next > Give name of data source as customer > Click Finish.

Apply mail merge: Go to View menu > Toolbars > Mail Merge option. This will open Mail Merge toolbar.

Go to View menu > Data Sources option > In data explorer, open the table under your data source name and drag drop fields into your main document where you need them.

In Mail Merge toolbar, click Next Mail Merge Entry button to see the first letter. Save your merged document or print it.

13. You are given the task to create label sized ID cards for all the students in the school with the details – Name, Class, Section, House and Date of Birth. The data is stored in a document table. Briefly discuss the process of creating these labels.

1. File menu > New > Labels options. In the Labels dialog box, do all the settings for the labels. We shall create multiple labels with different addresses.
2. In Labels tab, selected your registered data source in Database drop-down and Table 1 as the data table.
3. One-by-one add the fields from Database field drop-down using Insert button.
4. Arrange the fields in the Label Text box as you need.
5. Go to Format tab and define the page dimensions, number of labels in terms of and distance between them.
6. Go to Options tab and check the Synchronize content checkbox (optional).
7. Click on New Document button. A new document with label placeholders will appear.
8. Click on Next Mail Merge Entry button to preview the labels.
9. Click on Edit Individual Document button. The document with labels will be displayed.

Unit 2: Electronic Spreadsheets – (Advanced)

All Exercises are practical oriented.

Assessment

A. Select the correct option. – 1 Marks each.

- | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|
| 1. C | 2. C | 3. B | 4. D | 5. A | 6. C | 7. B |
| 8. B | 9. A | 10. B | 11. C | 12. C | 13. C | 14. A |
| 15. B | 16. A | 17. C | 18. B | 19. B | 20. C | 21. C |
| 22. A | 23. B | | | | | |

B. Answer the following questions – 2 marks each

1. What is the significance of sub-total feature in a spreadsheet?

Subtotals feature is a quick way to calculate automatic subtotals, averages and other numeric summary on a group of data. Subtotals works better on the sorted data. Some examples are: class-wise total marks, depart-wise average salary, city-wise population count etc.

2. Briefly describe a scenario/example where data consolidation is useful.

Data consolidation feature allows us to bring together data from different spreadsheets and workbooks into a consolidated form where various calculations are done on the data values. For example, if 4 separate workbooks contain the marks of students in 4 different sections of a class then this feature can be used to consolidate marks of all sections to calculate average performance whole class.

3. Anu has two sets of 10 marks each which she wants to apply on a dataset to analyse the output to improve students' performance in next exam. Write steps to help Anu apply these 2 sets of scenarios one by one.

First, select all the marks in first data. Go to Tools menu > Scenarios option. In the Create Scenarios dialog box, mention the name of the scenario (e.g., MARKLIST1) and click OK. Repeat the same for MARKLIST2. Now Anu can select different scenarios from the drop-down to observe and analyse the changing values.

4. What do you mean by Formula cell, Target value and Variable cell in Goal Seek?

Formula cell is the address of that cell that contains the formula to perform desired calculation.

Target value contains the expected output value.

Variable cell is the address of the cell whose value should change to get expected output value.

5. How can you say that Solver is an advanced form of Goal Seek tool?

Solver is an advanced form of goal seek in that it estimates the optimised values on the basis of multiple input values while in goal seek there is only one input value. Solver also considers certain constraints if any are given. Solver works on certain optimisation algorithms.

6. Why do we need the data sorted before applying sub-total feature on it?

Subtotal displays aggregate calculations on the group of data based on similar values of a field. So, the data needs to be sorted on that field for correct grouping.

7. How is Scenario feature different from Goal-seek? Explain with a small example each.

Scenario allows us to input a set of multiple values to observe the changes in output while in goal seek, we work with single value for the desired output.

8. Ajit has 3 sets of sales data which he wants to apply on the actual data to see how much earning his company will do in the end of the month. Which "what-if" analysis feature will be suitable for him and why?

In this situation, Scenario feature is useful because Scenario feature allows us to input a set of multiple values to observe the changes in output

9. Ajit wants to know how much savings are needed to be done in current month to keep his expenses at Rs. 100000 by month end. Which "what-if" analysis feature will be suitable for him and why?

The goal seek feature is most suitable in this situation since there is only single input value and single desired output. Goal seek tells us the input needed to get the desired output.

10. How is relative path different from absolute path?

Absolute path includes the original file path from the root of the storage while relative path excludes the common path to the file.

11. What is the advantage of relative hyperlinking?

Since relative hyperlinking works on the relative path which excludes the common original path to the file, it is

useful when the linked files are to be distributed to others along with the main file. User can copy the distributed folders anywhere on the computers and hyperlinks will not break.

12. In a formula, how will you refer to a cell B5 in a sheet named mysheet1?

mysheet1!B5

13. In a formula, how will you refer to a cell B5 in a sheet named mysheet1 in a workbook named myworkbook?

[myworkbook.xlsx]mysheet1!B5

14. What do you mean by registered data source?

A data source about which the application software is aware of its location and how to connect with it is called registered data source.

15. Why do we need to share documents?

In an online collaborative environment such as cloud drive or network drive, users can work on the same document through sharing feature. This saves time and effort in maintaining and updating multiple copies and minimises errors.

16. What is the advantage of tracking changes in a shared document?

In a collaborative setup where multiple users are changing the same document, it is necessary to track who has made what changes so that desired changes can be applied and rest can be rejected.

17. What actions can you take on the changes done by other users in a shared document?

We can either accept all changes, reject all changes, accept selective changes or reject selective changes.

18. What is the basic difference between track changes comments and general comments?

Q no. 18 - Answer missing

19. How is a function different from a sub-procedure?

A function returns a value after execution while a sub-procedure does not. A function can be used like any other function by its name while a sub-procedure is invoked from a keystroke or menu option.

20. How does a function return a value? Give example.

When we assign a value to be returned to a variable of the same name as that of function. E.g.

```
function myfunc()  
    'this function returns 0  
    myfunc=0  
end function
```

21. What is function argument? Give example.

When a function needs the values to be processed while it is invoked then the required values are passed as arguments to the function. E.g., addTwo(5, 19) here, 5 and 19 are arguments passed to addTwo() for processing.

22. Write the statement to store value 10 in cell A1.

ThisComponent.Sheets(0).getCellByPosition(0, 0).setValue(10)

23. Write a macro to copy value of one cell to another.

This will copy value of cell B1 to cell A1:

```
Sub doCopy()  
    v = ThisComponent.Sheets(0).getCellByPosition(1, 1).getString()  
    ThisComponent.Sheets(0).getCellByPosition(0, 1).setString(v)  
End Sub
```

24. Implement a loop to display values 1 to 20 in reverse.

This will display values 20 to 1 from cell A2 till A21

```
Sub show()  
    y=0  
    For x = 20 To 1 Step -1  
        ThisComponent.Sheets(0).getCellByPosition(0, y).Setvalue (x)  
        y = y + 1  
    Next  
End Sub
```

C. Answer the following questions – 3 marks each.

1. With a small example, explain how Solver is a better tool than Goal Seek in certain scenarios.

Goal seek tells us the input required to achieve a desired output. Solver works on certain algorithms to estimate the optimised inputs to get the desired output while considering any constraints given along with. E.g., if we need to know how many marks need to be gained in a subject to achieve over all 90% then Goal Seek is suitable but if we need to minimise salary expenses of 100 employees while constraint is that each employee should get a minimum amount then Solver is required.

2. What is the advantage of data consolidation?

Data consolidation feature is useful when there are separate copies of data on which some calculations need to be done. For example, if four sheets store the sales data in same layout then the figures can be summed up in a separate sheet using data consolidation feature.

3. Describe the syntax of referring to a cell in another worksheet.

To refer to a cell which is in another sheet, we need to tell the application the name of the sheet and the cell address in that sheet. The sheet name is mentioned first followed by an ! sign and then the desired cell address. For example, Worksheet_name!cell_address – if sheet name is Sale_June and cell address is A5 then Sale_June!A5.

4. What do you mean by base path in hyperlinking? What is the limitation of absolute linking?

Absolute linking contains the original path right from the root of the storage and when we copy the files to another computer the path does not update according to the new location. Relative referencing works considering the common path of linked files and the main file. The common path is called base path which is excluded in relative linking. This way, files can be distributed and copied to any computer and hyperlinking works.

5. How is relative linking a better way than absolute linking?

Refer to question 4.

6. Roma has saved Index.doc on path D:\my stories\fiction\2020. Index.doc contains relative hyperlinks, one for each of the chapter in the story. All the chapters are in separate files named as Chapter_x.doc, where x is the chapter number. All the chapters are on path D:\my stories\fiction\2020\pdf\draft. Which folder should she send to the publisher so that all the links work fine on publisher's computer too and why?

Files are linked relatively that means common base path D:\my stories\fiction\2020 is excluded in linking and only path /pdf/draft is used for linking. The path will be resolved from folder 2020 onwards so Roma should give folder pdf to the publisher. No matter where the files are copied, the relative path /pdf/draft will work.

7. How will you link a worksheet to a defined name in another sheet in the same workbook?

Go to Sheet menu > Link to External Data option. In the dialog box, Click Browse to locate the target file. It will display the names of all the data ranges in that file. Select the desired range and click OK.

8. What are the advantages of sharing a file over a cloud location?

In an online collaborative environment such as cloud drive or network drive, users can work on the same document through sharing feature. This saves time and effort in maintaining and updating multiple copies and minimises errors. Another advantage is the cost is minimised and work is done efficiently.

9. Atul has 4 worksheets of data from different branches of his company. All have identical layout. He needs to merge them into one sheet. How will he do that?

Atul will use Compare and merge feature of spreadsheet application. To merge the 4 worksheets, Atul will first open the first worksheet. Then, he will click on Edit menu > Track Changes > Merge Document. In the dialog box, locate and select the files need to be merged. Then. Click on Open button. In Manage Changes dialog box, accept or reject changes as you need and click Close.

10. What is the benefit of macros? How will you create and run a macro in a spreadsheet application?

In real life, people perform a lot of routine tasks on a fixed layout of data-set. In such scenarios, macros help in saving a lot of time and effort. This way, macros are used to automate routine tasks. For example, performing multiple complex calculations using several formulas daily on the data stored in same layout. For this, a macro can be created to execute calculations automatically in a few seconds. To create a macro, go to Tools menu > Macros > Record Macro option. The recording will begin. Perform the steps to be recorded and click on Stop Recording button in the popup.

D. Answer the following questions – 5 marks each.

1. Briefly describe the different ways of what-if analysis using a spreadsheet.

Major 3 ways of what-if analysis are given here:

Scenario: Scenario is a way to perform what-if analysis. A scenario is defined by a set of values which can be

applied on an existing data-set. Various scenarios can be created and applied on the original data-set to analysis different situations predicted in the scenario. This way, user can analyse different business scenarios by using Scenario feature. As you select different scenarios, you can observe and analyse the changing values.

Goal Seek: Goal seek allows us to determine the input for a desired output. For example, how many more students should have scored 70% to make class average 75%? Or, how many more five stars were needed for a web site to have its rating above 8? In goal seek, you need to specify 3 items – which cell you want changed, by which value (expected output) and which cell has the input value.

Solver: Solver is a more advanced tool than Goal Seek. It is used to find out best optimised results from the data by considering certain constraints. For example, maximizing the profits, minimising the expenses, estimating optimum budget etc. Solver analyses the values and constraints to provide the best possible solution.

2. How is data consolidation different from sheet comparison?

Data consolidation is used to perform combined calculations on different sheets and take out a summary of all the figures while comparison is done to check the changes done by multiple users in multiple copies of a sheet.

Data Consolidation allows us to bring together data from different spreadsheets and workbooks into a consolidated form where sum or average or other calculations are done on the data values. Let us see a simple example. Sheets named East Sale and West Sale need to be consolidated as their average in sheet Average Sale.

If there are multiple copies of same worksheet modified by multiple users then all of them need to be compared to check the data changes. Sometimes users forget to enable tracking of changes and changes made by them are not recorded. In such a case, you can compare the original document and changed document.

3. Describe a scenario where Solver is the best choice to apply.

A furniture company manufactures 4 types of items namely Table, Chair, Sofa and Bed. The billing of items is done on credit and details of billing amount are recorded. Then, an estimate of expected amount to be collected is taken as 80% of the billing amount. The owners want to know - How much billing of each item is needed to collect expected amount of Rs. 100000000 but for each subject, the billing amount should be at least Rs. 30000000?

4. How will you ensure that documents hyperlinked with the sheet are linked relatively?

To set up and insert relative hyperlinks, go to the Tools menu > Options option.

In the Options dialog box, go to Load/Save > General and check “Save URLs relative to file system” and “Save URLs relative to internet” check boxes. Click OK.

To insert a hyperlink into the spreadsheet do any of these:

Go to the desired cell or select the desired text. Then, Insert menu > Hyperlink option, or,

Click the Insert Hyperlink button on the Standard toolbar, or,

Drag-drop an item from the Navigator to the desired cell, or,

Type the target web address or URL or path to the target document at the point where you want to insert the hyperlink.

5. Manoj has details of employees in a table Employee_Master in a database named CompanyDB.odt. How will he link the data in his worksheet?

To link the database table data with the spreadsheet, do the following:

Go to, Tools menu > Options. In the Options dialog box, go to LibreOffice Base > Databases.

Registered databases will be listed.

Click on New button to locate the database to be registered and click OK on Create Database Link popup.

Finally click OK in Options dialog box.

To link the registered database, go to View menu > Data Sources option. Registered data sources will be listed in the Data Source Window. Navigate to the desired database and table in it. Select the whole table by clicking in top-left blank grey cell. Then, drag-drop the table to the sheet or click on Data to Text button in the Table Data toolbar.

Update any changes in the data in data source by selecting the data range in the sheet and using Data menu > Refresh Range option.

6. Write a brief note on various types of comment in spreadsheet.

Comments are another way of reviewing documents. Users can suggest changes by adding popup comments to the cells in the sheet. Calc provides two types of comments - comments on changes and general comments. Track changes comments are added to the changed cells and appear in the Manage Changes dialog box while reviewing the sheet but general changes do not.

To add/edit comments on changes in the selected cell, go to Edit menu > Track Changes > Comment option.

To add general Comments, right click on the cell > Insert Comment option or go to Insert menu > Comment option. General comments are indicated by a red dot in the top-right corner of the cell. General comments can be formatted like text and graphics.

7. **Anuj has a worksheet in a particular format. A copy of same sheet is with his assistant. They both made certain changes in their copies. How will Anuj keep his changes as well as accommodate assistant's changes also in his sheet? Write detailed steps.**

If there are multiple copies of same worksheet modified by multiple users then all of them need to be merged into the original sheet. In such a case, Anuj can compare his document and assistant's document.

To merge the worksheets, Anuj must first open his worksheet. Then, go to Edit menu > Track Changes > Merge Document option.

In the Merge With dialog box, select the assistant's file whose data needs to be merged and click on Open button. Manage Changes dialog box will appear. Accept/Reject changes as you need and click Close. The sheet will be merged.

8. **Consider this sheet named Employee and write macro to sort the data on the basis of department in ascending order.**

```
Sub Dosort
    Dim sortfields(1) As New com.sun.star.util.SortField
    Dim sortdesc(0) As New com.sun.star.beans.PropertyValue
    sheet = ThisComponent.Sheets.getByName("Employee")
    range_to_sort = sheet.getCellRangeByName("A2:C7")
    ThisComponent.getCurrentController.select(range_to_sort)
    sortfields(0).Field = 1
    sortfields(0).SortAscending = TRUE
    sortdesc(0).Name = "SortFields"
    sortdesc(0).Value = sortfields()
    range_to_sort.Sort(sortdesc())
End sub
```

9. **Referring to the sheet Employee, write macro to sort data on department in ascending order and basic salary in descending order under it.**

```
Sub Dosort
    Dim sortfields(1) As New com.sun.star.util.SortField
    Dim sortdesc(0) As New com.sun.star.beans.PropertyValue
    sheet = ThisComponent.Sheets.getByName("Employee")
    range_to_sort = sheet.getCellRangeByName("A2:C7")
    ThisComponent.getCurrentController.select(range_to_sort)
    sortfields(0).Field = 1
    sortfields(0).SortAscending = TRUE
    sortfields(1).Field = 2
    sortfields(1).SortAscending = FALSE
    sortdesc(0).Name = "SortFields"
    sortdesc(0).Value = sortfields()
    range_to_sort.Sort(sortdesc())
End sub
```

10. **Referring to the sheet Employee, write a function to return average of all basic salary values.**

```
Function getAvgBasic()
    total = 0
    avg = 0
    range = ThisComponent.Sheets(0).getCellRangeByName("C2:C7")
    rows = range.getData()
```

```

For x = LBound(rows) to UBound(rows)
    total = total + rows(x) (0)
Next
avg = total/6
getAvgBasic=avg

```

End Function

- 11. A worksheet has some values with font colour blue and cell fill colour yellow. Write steps to create a macro to copy-paste only the values of these cells to another location in the same sheet. (Hint: Use paste-special while pasting the data).**

Go to Tools menu > Options option > In Options dialog box, LibreOffice > Advanced and select Enable macro recording (may be limited) checkbox. Then, click OK.

Now, go to Tools menu > Macros > Record Macro option. The macro will begin recording with a popup containing Stop Recording button.

Select the desired cells and press Ctrl+C.

Go to the target cell, right click and select Paste Special > Text.

Click on the Stop Recording button in the popup.

Unit 3: Database Management System

Note: The sessions that have lab exercises are not mentioned here. Students must solve them in the lab as practical implementation.

SESSION 2: Data Storage

1. Research-based. Students must do it themselves.
2. Varchar or char is most suitable since on these numbers no arithmetic is needed so no need to take them as numeric.
3. To store various types of values such as number, text, dates, currency values, binary data we need to have different types of fields in a database.
4. Form is used to display and manipulate data while reports display the data in a formal format for analysis.
5. Tables store all the data. Rest of the operations follow when data is there in the tables.
6. Primary cannot be null and it identifies the records uniquely while foreign key can be null and it refers to the primary key in parent table.

Assessment

A. Select the correct option. – 1 Marks each.

- | | | | | | | |
|-------|-----------------------|-------|-------|-------|-------|-------|
| 1. C | 2. B | 3. D | 4. A | 5. A | 6. B | 7. C |
| 8. C | 9. D (Both a) and b)) | 10. D | 11. D | 12. A | 13. B | |
| 14. D | 15. D | 16. A | 17. A | 18. D | 19. D | 20. B |
| 21. D | 22. D | 23. A | 24. C | 25. B | 26. A | 27. C |
| 28. B | 29. C | 30. C | 31. D | 32. B | 33. B | 34. C |
| 35. D | 36. A | | | | | |

B. Answer the following questions – 2 marks each

1. What is data?

Data is raw piece of information that alone does not make sense. It can be any value such as, name of a person, a number, images, sound, etc. For example, Ravi, 4, student, etc.

2. What is information?

When the data is processed and converted into a meaningful and useful form, it is known as information.

For example, Ravi is 4 years old and he is a student. is information.

3. What do you mean by the terms database and DBMS?

A database is a collection of related data from which users can efficiently retrieve the desired information. A database can be a simple collection of text data in a simple tabular form to a complex collection of images, audio or video.

DBMS is a collection of programs that enables users to create, maintain database and control all the access to the database. The primary goal of the DBMS is to provide an environment that is both convenient and efficient for user to retrieve and store information.

4. List any 2 advantages of a database.

- i. Security: To prevent unauthorized access to the database, DBMS uses features like encryption, authentication, authorization and views to provide security to the database.
- ii. Data Integrity: Data integrity is a set of rules that DBMS provides to see that data incorrect or inconsistent data is not stored.

5. In two lines, explain how databases help businesses.

Almost all the small, medium and large businesses of all kinds need to manage their data and for that they use databases. Database help them manage the data related to day-to-day operations, employees, finances, and customers etc.

6. What is RDBMS?

Relational databases are more widespread than the flat file database alternatives. Relational databases break up the single table of flat file database model. Therefore, relational databases are split up into multiple database tables with methods for the tables to work together. These tables then need to be linked in some way by the database designer. Links are established with primary and foreign keys which are unique identifiers for the database tables.

7. What is relation in a database?

The tables that store the data about any entity or event are called relations. Each relation is described by some attributes which are represented by fields and each set of data is considered as a record in the relation.

8. What is the use of database forms?

In databases, it is possible to use forms for the creation, display and modification of records. Data entry in a form is visually easier to understand than in a table, and is simpler for the user. Forms may contain fields for data entry, field descriptions (names), action buttons, menus, pictures, and design elements.

9. What is the significance of database reports?

Reports present the information stored as data in the database in a form easy to understand and analyse. Reports are meant for the executives and managers who need to analyse the status of various affairs in the business help take decisions. Reports help in this.

10. How query helps in retrieving information from the data stored in the database?

Using a query, we mention the fields which store the data we need and we also mention the criteria in the query to filter out the desired records as per our requirements. Query can relate multiple tables on the basis of common fields and take out the desired data.

11. How is VARCHAR is different from CHAR data type in a database?

CHAR text (fix): Stores exactly the length specified by user. Pads with trailing spaces for shorter strings. Accepts any UTF 8 Character.

VARCHAR (text): Stores up to the specified length. No padding (Same as long var char)

12. What is the relation between a foreign key and a primary key?

Primary key uniquely identifies each record in the table. Primary key consists of a single attribute or multiple attributes in a combination.

The foreign key is the field in the child table that refers to a matching value in a column in another table (parent). It cannot contain the values other than that column. It can contain the duplicate values also.

13. List any two commands of DDL and DML each.

DDL commands:

CREATE TABLE "Sales"

```
(  
    "ITEM_CODE" Varchar(4),  
    "SALE_DATE" Date,  
    "QTY_SOLD" Numeric(5)
```

```
);
```

Alter table "Sales" add Particulars varchar(200) after QTY_SOLD

DML commands:

Delete from "Item" where PRICE < 700;

Update "Item" set "ITEM_TYPE" = 'STRETCH' where "ITEM_TYPE"='STRETCHABLE';

14. Why do we need a transaction or child table?

If we keep all the data in a single table then it will lead to data redundancy and it will be difficult to manage the data such as insert/delete. To avoid these problems, we break the table into multiple and relate them on common fields.

15. Mention the use of any two field properties of a table.

Default value property ensure a pre-set value to be stored in the table if user skips data entry in it.

Entry required is like not null constraint that ensures that the field does not remain empty.

16. How will you set a primary key in a table?

Right click on the desired field name in Table Design View and select Primary key option.

17. Give two basic differences between table data view and table design view.

Table design view allows the user to define the structure of the table in terms of various fields and field properties. User sets up primary key in this view also.

Data view displays the data stored in the table and user can work with it by inserting, deleting and modifying.

18. Write SQL statement to create a table Person to store Full Name, Birth Date, email ID and City. Email ID is primary key.

```
CREATE TABLE person(fullname varchar(100) not null, BirthDate date, emailID varchar(100) primary key, city varchar(100))
```

19. How will you sort data in a database table?

In Table Datasheet View, select the desired table and click on Sort Ascending or Sort Descending buttons in the Table Data toolbar.

20. What do you mean by referential integrity?

Referential integrity is the concept to ensure that accurate and consistent data is maintained in the database tables which are related such as value entered in foreign key in child table must match a primary key value in the parent table.

And, updates and deletes of unwanted data should not be done.

21. List one example of 3 types of relationship each.

One-to-one: One passenger is allocated one seat in the train.

One-to-many: A PNR identifies many passengers in a train journey.

Many-to-many: Many teachers teach many students.

22. What is a wildcard? Mention 2 examples of wildcard.

A wildcard is a shortcut to specify value patterns that are shared by multiple values in a table. For example, to display the details of all the employees whose names begin with letter 'P' is represented as LIKE 'P*' which means any number of occurrences of any letter. Or, details of those city names have exactly 7 characters then we can use ? wildcard which means exactly one letter as LIKE '???????'.

23. How will you group data on a field in query design view?

In the Query Design View, drag-drop the desired field from the table field list down to the Field section of the grid. Then, below that field, in Function section, select Group option from the drop-down.

24. What do you mean by control properties?

Usually a graphical component used to create form interface for user interaction is called control such as textbox, listbox, checkbox, button etc. Property defines the look and functionality of the control such as Font, BackgroundColor; control will be Enabled or not, control will be visible or not etc.

C. Answer the following questions – 3 marks each

1. What is the significance of a database?

Database approach came into existence due to the drawbacks and limitations of file processing system. In file processing systems; updating, deleting and maintaining the data is difficult. In the database approach, the data is stored at a central location and is shared among multiple users. Thus, the main advantage of DBMS is centralization of data. Databases also reduce data redundancy.

2. Briefly discuss any 2 major advantages of a database.

- i. The ability to update and retrieve data: This is the fundamental feature of a DBMS. Without the ability to view or manipulate data, there would be no point to using a database system. Updating data in a database includes adding new records, deleting existing records and changing information within a record.

- ii. **Support Concurrent Updates:** Concurrent updates occur when multiple users make updates to the database simultaneously. Supporting concurrent updates is also crucial to database management as this ensures that updates are made correctly. Otherwise, it would lead to the loss of important data and/or inaccurate data stored.
3. **How database can help a school like yours?**
Let the students answer this by discussing with the teacher.
4. **What is the basic difference between the structure of a flat file system and relational database?**
Flat file is a database with one database table. One single database table can include all the database's fields.
Relational databases are split up into multiple database tables with methods for the tables to work together. These tables then need to be linked in some way by the database designer. Links are established with primary and foreign keys which are unique identifiers for the database tables.
5. **In one line, define the terms table, query, form and report.**
A Table is a collection of data related to an entity or event.
A query is used for selection of information from one or several tables.
Forms allow to insert new data, display data and modification of records in a table besides viewing the data.
Reports are the formal presentation of desired data as information to analyse and make decisions.
6. **What is the significance of foreign key and primary key in a database?**
Primary key uniquely identifies each record in the table. Primary key consists of a single attribute or multiple attributes in a combination.
The foreign key is the field in the child table that refers to a matching value in a column in another table (parent). It cannot contain the values other than that column. It can contain the duplicate values also.
They both help in reducing data redundancy.
7. **Briefly describe the two logical types of SQL.**
The data stored on a database can be manipulated using some commands. There are two types of languages for this task. These are:
 - i. Data definition language (DDL) includes database commands that define, modify and remove the structure of various objects like tables, indexes, users, etc. in a database. Common DDL statements are CREATE, ALTER, and DROP.
 - ii. Data manipulation language (DML) includes the commands that allows to access and manipulate data in a database. E.g.,
Insertion of new information into the database - INSERT statement, deletion of information in the database - DELETE statement and modification of information in the database - UPDATE statement.
8. **List the steps to design a table using table wizard?**
Following are the steps to create table using Table Wizard:
 1. Table object > Select Use Wizard to Create Table in Tasks pane.
 2. In the Table Wizard, select a sample table and add desired fields. Click Next button.
 3. Specify desired field properties. Click Next button.
 4. Specify for automatic primary key field or select a field to be a Primary key. You may uncheck the checkbox to skip creating any primary key. Click Next button.
 5. Specify a relevant, unique name to the table. Click Finish button.
9. **How will you add a new field and a new constraint in a table? Explain with an example.**
The syntax to add a field to a table is: Alter table "table name" add "new field" "type" before "existing field name"
For example, alter table item add item_type varchar(50).
The syntax to add a constraint on a field is: Alter table "table name" add [CONSTRAINT "constraint name"] constraint definition.
For example, alter table item constraint "chk_qty" add check(qty > 0)

D. Answer the following questions – 5 marks each

1. Consider the following table and write SQL statements to answer the questions that follow:

SubscriberID	Name	Connection	Pending_Amount
S0001	Anand Kumar	Broadband	2200
S0002	Dinesh Verma	Postpaid	3310
S0003	Minal Sen	Postpaid	1200
S0004	Suman Kumari	Broadband	0
S0005	Ravi Kumar	Broadband	900
S0006	Atul Om	Postpaid	0

i. Create table Billing with Subscriber ID as primary key, name should not be blank, default connection is Prepaid.

Create table Billing(SubscriberID char(5) primary key, Name varchar(100) not null, Connection varchar(50) default "Prepaid", Pending_Amount currency)

ii. Display all the names starting with letter 'A'.

Select Name from Billing where Name LIKE "A*"

iii. Display the connection type of those who have letter 'u' in their name anywhere.

Select Name, Connection from Billing where Name LIKE "*u*"

iv. Whose names are ending with letter 'r'?

Select Name from Billing where Name LIKE "*r"

v. Display the interest on non-zero pending amounts as 8% along with total amount.

Select SubscriberID, Interest as Pending_Amount * .08, Total_Amount as Pending_Amount + (Pending_Amount * .08) from Billing where Pending_Amount >0

vi. Display total pending amount connection type-wise.

Select Connection, SUM(Pending_Amount) from Billing group by Connection

vii. Increase non-zero pending amounts by 8%

Update Billing set Pending_Amount = Pending_Amount + (Pending_Amount * .08) where Pending_Amount >0

viii. Delete all records having non-zero pending amount.

Delete Billing where Pending_Amount >0

ix. Who is having no pending amount on broadband connection?

Select Names from Billing where Pending_Amount = 0 and Connection = 'Broadband'

x. Insert a new record for subscriber code S0007 with suitable assumed values.

Insert into Billing Values('S0007', 'Amit Kumar Gupta', 'Broadband', 0)

2. Perform following alterations in the above table:

i. Add a field Connection_Date

Alter table Billing add Connection_Date date

ii. Add a constraint on pending amount to check if it is 0 or more.

Alter table Billing constraint chk_pa add check(pending_amount >= 0)

iii. Rename the field 'Name' to Subscriber_Name.

Alter table Billing alter column "Name" rename to "Subscriber_Name"

iv. Rename the table to 'Pending_Billings'.

alter table "Billing" rename to "Pending_Billings"

Unit 4: Web Applications and Security

Note: The sessions that have lab exercises are not mentioned here. Students must solve them in the lab as practical implementation.

SESSION 2: Networking Fundamentals

1. How is internet different from the network in a closed, small area like your computer lab?

Internet is a worldwide network. It is composed of various networks across the world. Over internet a computer can access information which can be stored on another computer anywhere in the world while a network in a closed area is made of a limited number of computers, which can access each other's shared data and resources. It is very small network confined in a closed area while internet is vast and worldwide.

2. How WWW is different from internet?

The World Wide Web, or simply Web, is a way of accessing information over the medium of the Internet. It is an information-sharing model that is built on top of the Internet. The Web uses the HTTP protocol to transmit data. Internet is a massive network of computer networks. It connects millions of computers together globally, forming a network in which any computer can communicate with any other computer.

3. What is a modem?

Computer system accesses Internet via telephone lines. A modem connects the computer system with the telephone lines to convert the digital signals to analog and vice versa.

4. What is the role of ISP in accessing the internet?

Company or organisation that provides the access to internet. Access is provided through a modem that connects your computer with the service providers internet server. Modem can be wired (Digital Subscriber Line, dial-up, cables) or wireless (Wi-Fi, 3G/4G etc.)

Connectivity provides a wide choice of data transfer speed and other services along with internet access. The kind of connectivity available to you depends connectivity facilities in your area.

5. How does data travel on internet?

1. The data is broken up into bits of same sized pieces called packets.
2. A header is added to each packet explaining where the data has come from, where it should end up and where it fits in with the rest of the packets.
3. Each packet is sent from computer to computer until it finds its destination. Each computer on the way decides where next to send the packet. All packets may not take the same route.
4. At the destination, the packets are examined. If any packets are missing or damaged, a message is sent asking for them to be re-sent. This continues until all packets have been received intact.
5. The packets are now reassembled into their original form.

SESSION 9: Workplace Safety

1. Imagine a public place which you visited recently, which safety hazards did you notice there?

Recently visited to a Bank and noticed the following safety hazards there:-

Slippery and unsafe passages: Confined narrow passage packed with crowd.

Ergonomic: Incorrect sitting posture.

Electricity: Improper installation and fitting of electrical equipment.

Fire: Absence of Appropriate safety measures.

2. What are the common safety hazards likely at a school?

Schools have certain areas which are accident prone such as science labs and playground. Science labs

have threats of fire, chemical spillage and getting wounded by careless handling of equipment. In the playground, especially for kids, various swings may be the cause of harm if students rush or ride them in improper way.

SESSION 10: Maintain Workplace Safety

1. **What is the use of First Aid Kit?**

First Aid Kit is a mandatory requirement at all workplaces irrespective of their nature and kind however, it should be equipped with suitable tools and medicines. First Aid Kit helps in minimising the risk of life until the help arrives, It enables the victim to hang on for a little longer time until the real help is reached.

2. **Discuss in brief the ergonomics related with working on computer.**

While working on the computer the first and foremost is posture which needs to be correct. Proper sitting, suitable chair and its height, elbows must rest parallel on the arms of the chair, positions of neck and shoulder should be relaxed, correct angle of wrists while using keyboard and mouse, suitable distance of eyes from the monitor, proper brightness of the monitor, right angle of knees and use of foot rest are some of the common ergonomic issues related to using a computer.

SESSION 11: Prevent Accidents and Emergencies

1. **List any 4 different workplaces you might have seen and suggest how common accidents can be prevented there.**

Following are the workplaces having prone to accidents and their prevention: -

1. **Maintenance Room strewn with wire-** Tripping over sometimes may cause serious accidents as it leads to falling objects and further threat to life. It can be prevented through informing all in advance, cordoned off area, restricted access and suitable warning sign.
2. **Construction site** - Falling down from ladder, edge and other unprotected area may lead to serious injuries or even death. It can be prevented through proper training of person working at height, equipped with adequate gears and arrangements of instant first aid of advance level.
3. **Factories** - Improper use and mishandling of tools lead to the danger for the people on the workplace. It can be prevented through proper training and methods, correct placement and locations of tools.
4. **Warehouse** - Accidents due to electrocution, tools and machine handling, lifting. Accidents can be prevented by using warning sign, restricted access, in-house traffic rules with signal controls.

SESSION 12: Various Workplace Emergencies

1. **How do you ensure a healthy living being a student?**

We can follow a regime of regular exercises, yoga, good reading and meditation to keep mental stress at bay and develop a positive mind set. Play some sort of sports, jogging and gym for physical exercise or games like chess for mental fitness. Healthy eating and having some sort of discipline in eating brings out good physical results and improves personality. Observe good human values and positive perspective.

2. **What is the importance of safety at workplace?**

As we learnt that workplaces are mostly dynamic in nature and depending on that, their environment varies. Certain workplaces are quiet and less crowded while some workplaces are noisy and crowded. For different workplaces there are different safety threats. A safe working environment ensures better work performance.

3. **Describe some safety issues at school and how to prevent them?**

Schools have certain areas which are accident prone such as science labs and playground. Science labs have threats of fire, chemical spillage and getting wounded by careless handling of equipment. In the playground, especially for kids, various swings may be the cause of harm if students rush or ride them in improper way. Suitable guidelines, strict checks and thorough discipline can prevent accidents in these places. Teachers and additional personnel can be delegated the task of vigil and monitoring. Suitable first aid facilities and access to call help should be in place.

4. **Describe some common safety hazards.**

Some common workplace safety hazards are related to the following items or factors:

Ergonomic: Incorrect posture, prolonged work hours, improper use of equipment cause harm to muscles and body joints.

Work environment: Noisy workplaces, poor lighting, over-crowded places, poor work ethics, poor work policies and underpaid jobs cause distress, physical ailments, and psychological disorders.

Chemical and physical: Exposure to hazardous chemicals and radiations leads to poisoning and skin, respiratory and vision-related harms. Places dangerous for human life, accidents, electrocution, fire outbreaks, flooding etc. are also some workplace hazards.

5. What is a first aid kit? What is its significance? What are the contents of a standard FAK?

First aid kit is a set of basic tools and medicines which are useful in providing instant relief to the victim until real help arrives. It is a must for all kind of workplaces because in absence of a first aid kit a victim who could be saved might succumb to the injuries. A standard first aid kit includes Plasters in different sizes and shapes, sterile gauze dressings, bandages, safety pins, small scissors, cleansing wipes, thermometer, antiseptic cream/ liquid, painkillers, other common diseases pills, small torch.

6. Describe computer related ergonomics?

While working on the computer the first and foremost is posture which needs to be correct. Proper sitting, suitable chair and its height, elbows must rest parallel on the arms of the chair, positions of neck and shoulder should be relaxed, correct angle of wrists while using keyboard and mouse, suitable distance of eyes from the monitor, proper brightness of the monitor, right angle of knees and use of foot rest are some of the common ergonomic issues related to using a computer.

7. How can we prevent common accidents at workplace?

Accidents can be prevented by alertness and being careful. Common preventive measures against accidents at workplaces are:

1. Safety guidelines, rules and their communication to all the people involved.
2. Conspicuous warning signs, directions, safety tips and indicators for diversions.
3. Trained and efficient housekeeping with suitable guidelines and rules for safety while working.
4. Check on unauthorized access with the help of ID cards, security checks, digital swipe cards, fingerprint scanners, CCTV cameras, alarm systems etc. and need-to-access security policies.
5. Safety guidelines for specific operations at production floors and careful operation of the equipment.
6. Risk assessment for potential dangers and possible losses to help in devising effective preventive safety measures.
7. Employing trained and skillful personnel ensures that major safety guidelines are taken care of.
8. Discipline, alertness, and positive attitude of the people.

8. What are various types of workplace emergencies? Describe any 2.

Various workplace emergencies are Work-specific, equipment related, natural calamities civil or behavioural and health related.

Health related emergencies are common at dangerous work environments like chemical plants, mines, oil-rigs and medical research labs etc. Workers in factories may be exposed to smoke, poisonous gases, extreme heat, extreme cold, radiations, intense lighting, high decibel noise and extreme physical exertion. Careful, efficient and regular safety measures can only protect workers from the impending harm.

Equipment related emergencies like sudden injury, cuts or bruises; body-part or cloth stuck in the machinery, accidents related to turbines, boilers and chemical plants; crashes and accidents by moving objects – vehicles, lifts, trolleys and carts etc.

9. What are some health hazards at workplaces?

Nature of work and workplace environment affect the health of the workers. Due to work-specific environment workers may get exposed to different kinds of health hazards such as poisonous gases, harmful radiations, inflammable materials etc., sewage cleaners lose their lives due to poisonous gases and deep running smudge. At hospitals, staff comes in direct contact of the patients with infectious diseases, people working in refineries, chemical plants and dye industry tend to get their respiratory system infected with hazardous chemical, tiny dust particles and general air contamination, extreme temperatures may cause discomfort or danger to physical health. People working behind desks with least or zero physical movement are prone to ailments related to heart, backbone and neck. Minimised physical activity takes a toll on the physical fitness. Long durations of standing (shopping mall, food joint), too much physical movements such as by salespersons, traffic policemen, waiters etc.

10. How do sports and basic human values help in healthy living?

We play sports for recreation as well as to keep fit. Sports also keep us stress free and enhance our personality. Sports influence our attitude positively. Game like chess, sudoku etc. improve mental faculties. Basic human values such as humility, respectfulness, respecting other's perspectives, being considerate, developing civic sense, clean and good habits make us strong from inside and develop a positive outlook.

Assessment

A. Select the correct option to answer the following questions - 1 mark each.

- | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|
| 1. b | 2. b | 3. a | 4. b | 5. c | 6. b | 7. a |
| 8. a | 9. c | 10. b | 11. a | 12. a | 13. c | 14. b |
| 15. d | 16. b | 17. a | 18. d | 19. a | 20. b | 21. b |
| 22. a | 23. a | 24. a | 25. c | 26. c | 27. a | 28. b |
| 29. b | 30. a | 31. a | 32. b | 33. c | 34. c | 35. b |
| 36. a | 37. d | 38. a | 39. d | 40. a | 41. d | 42. b |
| 43. c | 44. b | 45. c | 46. c | 47. d | 48. b | 49. b |
| 50. d | | | | | | |

Ubuntu Specific Questions.

- | | | | | | | |
|------|------|-------|------|------|------|------|
| 1. c | 2. c | 3. d | 4. a | 5. b | 6. C | 7. b |
| 8. a | 9. d | 10. b | | | | |

B. Answer the following questions – 2 marks each.

1. How will you open 'Ease of Access Centre' in windows 7 or 'Universal Access' in Linux?

Steps to launch accessibility options in Windows 7 are as below:

Click on Start.

Click on Control Panel.

Click the Ease of Access link.

Click Ease of Access Center link.

2. What do you mean by accessibility features?

Computer Accessibility refers to the user friendliness of a computer system for all to use a computer regardless of their disability or impairment.

3. What do you mean by mouse keys?

Mouse Keys allow the user make use of arrow keys on the numeric keypad to move the keys on screen and Enter key to click. For example, user can press top arrow and left arrow key to move mouse pointer diagonally upwards towards left side.

4. What do you mean by sticky keys?

Sticky Keys allow user to keep the key active when it is pressed once and when any other key is pressed then it is processed by the computer with the currently active key. For example, if user has pressed Window key on the keyboard, then it will remain active. Now, if user clicks only letter E then it will be interpreted as Windows+E and Windows Explorer will open up. Once enabled, sticky keys icon will appear in the system tray.

5. What do you mean by filter keys (Windows) or bounce keys (Linux)?

Filter Keys check box, when selected, makes keyboard ignore rapidly repeated or long pressed key to avoid repeated typing of the same key thereby helping people who type with trembling hand.

6. What is the use of Narrator (Windows) or Orca or any screen reader in Linux?

Narrator allows read aloud of any text on the screen and Turn on Audio Description option lets visually impaired person hear descriptions of what is happening in any videos.

7. What is Narrator used for in Windows?

Narrator allows read aloud of any text on the screen and Turn on Audio Description option lets visually impaired person hear descriptions of what is happening in any videos.

8. How is a LAN different from PAN?

A Local Area Network (LAN) covers a small geographic area, such as home, office or any building. These are used within smaller geographic range and have limited communication lines. LANs have higher data transfer rate. It is useful for sharing resources like files, printers and other applications. A LAN can be set up using wireless media also.

A Personal area Network (PAN) is a computer network which is used by single person for communication among the computer devices. The reach of a PAN is few meters only. Typically, this is used at home or in a small office. The devices are commonly connected here through wire or Bluetooth, Infrared technology.

9. How is a WAN different from MAN?

A wide Area Network (WAN) is a geographically independent communication network. It covers a large geographical area. It may be privately owned or rented and has lower data transmission rate. For example, network setup by BSNL.

A Metropolitan Area Network (MAN) is a large network that usually spans a city, but does not extend the boundaries of the immediate town, city, or metropolitan area. Data transfer rate in Metropolitan Area Network is little slower than the Local Area Network. The distance covered by this kind of network enables a large number of users to communicate with each other in the network. For example, network set up by MTNL in Delhi and Mumbai, cable TV network in a city.

10. What is internet?

The Internet is a vast network that connects computers all over the world. It is widely used by students, educational institute; scientist and professional to gather information for research and general information and communicate from anywhere.

11. What do you mean by computer networking?

Computer networking refers to interconnection of computing devices that can exchange data, services and various resources with each other. For instance, one computer connected with a computer can be accessed for printing by other computers on the network or file without the help of sharable media. Communication medium can be simple as cables or advanced as wireless and satellites.

12. What is WiFi connectivity?

Wi-Fi is a popular technology that allows an electronic device such as computers or mobile phones to exchange data wirelessly over a network, including high-speed Internet connections. Wi-Fi devices such as personal computer, smartphones, video game console, etc. can connect to a network resource such as Internet through a device called the Wireless Access Point.

13. Briefly explain instant messaging?

Instant messaging (IM) is a form of communication over the Internet that offers an instantaneous transmission of text-based messages from sender to receiver. Most instant messaging software include the option for performing file transfers, audio chat, video calling and conferencing, sharing desktops, etc. apart from standard text chat. Instant messaging software is widely used for personal and commercial use. In this session, you will be introduced to the concept of instant messaging, the steps to create an instant messaging account and also work with instant messaging software.

14. What do you mean by a blog?

A blog is a discussion style site used by non-technical (and technical users) users for creating personal web pages. Blogs are similar to an online personal diary and simple to use. You can use a blog to convey messages about events, announcements, news, reviews, etc. Blogs are usually managed using a web browser and this requires active internet connection. You can also use offline blog software to create content first and later publish the content when an active internet connection is available.

15. What do you mean by the term E-commerce?

E-commerce is an electronic commerce where customers can buy or sell goods over the Internet. It may also include online shopping for retail sales direct to consumers via web sites and mobile apps, and conversational commerce via live chat, chatbots, and voice assistants, Provide or participate in online marketplaces, which process third-party business-to-consumer (B2C) or consumer-to-consumer (C2C) sales.

16. List any 4 best practices about internet security.

Following are the best practices for Internet security:

- Use strong passwords
- Regular Data Backup and clear browser cookies frequently
- Encrypt Data and Use antivirus and antispyware software
- Secure your username and password

17. What is a cookie?

Cookies are small blocks of data created by a web server on the web browser while a user is browsing a website. Cookies are placed on the device used to access a website, and more than one cookie may be placed on a user's device during a session.

18. Give some examples of crowded and potentially dangerous workplace.

Following are the examples of crowded and potentially dangerous workplace:

- Factories and construction site.
- Hospital
- Maintenance Room
- Working on running machines and furnaces

19. List some workplace safety hazards.

Some common workplace safety hazards are related to the following items or factors:

- Ergonomic: Incorrect posture, prolonged work hours, improper use of equipment cause harm to muscles and body joints.
- Work environment: Noisy workplaces, poor lighting, over-crowded places, poor work ethics, poor work policies and underpaid jobs cause distress, physical ailments, and psychological disorders.
- Chemical and physical: Exposure to hazardous chemicals and radiations leads to poisoning and skin, respiratory and vision-related harms. Places dangerous for human life, accidents, electrocution, fire outbreaks, flooding etc. are also some workplace hazards.

20. What is first aid?

First aid kit is a set of basic tools and medicines which are useful in providing instant relief to the victim until real help arrives. It is a must for all kind of workplaces because in absence of a first aid kit a victim who could be saved might succumb to the injuries.

21. What are some common types of accidents that may occur at workplace?

Following are common types of accidents that may occur at workplace:

- Slipping on Wet floors, slippery surfaces, edges of the stairs.
- Tripping while moving in cluttered place.
- Falling down from the ladder, edge and roofing.
- Hit by vehicle in car parking or warehouse.

22. List some countermeasures to hazards at workplaces.

Accidents can be prevented by alertness and being careful. Common preventive measures against accidents at workplaces are:

- Safety guidelines, rules and their communication to all the people involved.
- Conspicuous warning signs, directions, safety tips and indicators for diversions.
- Trained and efficient housekeeping with suitable guidelines and rules for safety while working.
- Check on unauthorised access with the help of ID cards, security checks, digital swipe cards, fingerprint scanners, CCTV cameras, alarm systems etc. and need-to-access security policies.
- Safety guidelines for specific operations at production floors and careful operation of the equipment.
- Risk assessment for potential dangers and possible losses to help in devising effective preventive safety measures.
- Employing trained and skillful personnel ensures that major safety guidelines are taken care of.
- Discipline, alertness, and positive attitude of the people.

C. Answer the following questions – 3 marks each.

1. What is the significance of Accessibility options in a computer?

Computer Accessibility refers to the user friendliness of a computer system for all, regardless of their disability. This is mainly a software issue. However, when a combination of hardware and software, it enables a person with a disability or impairment to use a computer. It is known as Assistive Technology.

2. How will you setup mouse key?

The steps are

- Click on Start.
- Click on Control Panel.
- Click the Ease of Access link.
- Click Ease of Access Center link.
- Turn on Mouse Keys

3. How will you setup sticky key?

The steps are

- Click on Start.
- Click on Control Panel.
- Click the Ease of Access link.
- Click Ease of Access Center link.
- Turn on sticky Keys

4. **How will you setup filter key (Windows) or bounce key (Linux)?**

The steps are

- Click on Start.
- Click on Control Panel.
- Click the Ease of Access link.
- Click Ease of Access Center link.
- Turn on filter Keys

5. **How will you setup the mouse pointer so that it hovers on a window and that window activates.**

- Click on Start.
- Click on Control Panel.
- Click the Ease of Access link.
- Click Ease of Access Center link.
- Click on Use text or visual alternatives for sounds in Ease of Access Center.

In Ease of Access Center, click Make the mouse keys easier to use link.

Here, you can change the colour and size of mouse pointers. You can turn on mouse keys of numeric keypad. You can set option to activate any window just by bringing mouse pointer over it instead of having to click it.

6. **Briefly explain the advantages of networking.**

Data Sharing: One of the most important uses of networking is to allow the sharing of data. Users can send text files, spreadsheets, documents, presentations, audio files, video files, etc. to other users.

- **Hardware Sharing:** Hardware components such as printers, scanners, etc. can also be shared. For example, instead of purchasing 10 printers for each user, one printer can be purchased and shared among multiple users thus saving cost.
- **Internet Access Sharing:** You can purchase a single Internet connection and share it among other computers in a network instead of purchasing multiple Internet connection for each computer. This is very commonly found in Internet café (browsing centres), schools, colleges, companies, etc.
- **Usage of network-based applications** such as web browsers, email clients, chat application, audio & video calling, etc is another advantage.

7. **What limitation of LAN are overcome in WAN?**

LAN covers a small geographic area, such as home, office or any building. These are used within smaller geographic range and have limited communication lines whereas WAN covers a large geographical area such as network connection between two or more countries for example - mobile network.

8. **What is a browser?**

A web browser is application software for accessing the World Wide Web or a website. When a user requests a web page from a particular website, the web browser retrieves the necessary data from a web server and then displays the page on the user's device.

9. **List various types of internet connectivity.**

Some of the commonly used Internet connectivity are:

Dial-up: Dial-up Internet access is a form of Internet access that uses the facilities of the public switched telephone network (PSTN) to establish a connection to an Internet service provider (ISP) via telephone lines using a device called MODEM. Dial-up connections are extremely slow.

DSL: Digital subscriber line (DSL) provides Internet access by transmitting digital data over wires of a local telephone network. DSL service is delivered along with wired telephone service on the same telephone line. For using a DSL connection, you need a DSL modem and a subscription.

Cable Internet Access: Cable Internet Access is a form of broadband Internet access that uses the cable television infrastructure. Cable Internet Access is provided through existing cable TV networks.

3G: 3rd Generation is a set of standards used for mobile devices and mobile telecommunication services and networks. High-Speed Downlink Packet Access (HSDPA) is 3G mobile telephony communications protocol that allows higher data transfer speeds and capacity.

WiMAX: Worldwide Interoperability for Microwave Access is a wireless communications standard designed to provide mobile broadband connectivity across cities and countries through a variety of devices.

Wi-Fi: Wi-Fi is a popular technology that allows an electronic device such as computers or mobile phones to exchange data wirelessly over a network, including high-speed Internet connections. Wi-Fi devices such as

personal computer, smartphones, video game console, etc. can connect to a network resource such as Internet through a device called the Wireless Access Point.

10. What is the standard process of online shopping? Explain in brief.

All online shopping websites follow following standard shopping process:

1. User registers on the website.
2. User searches for products and browses through product catalogues.
3. User selects, reviews and adds the products in online shopping cart.
4. User reviews the cart and finalises the products in the cart.
5. User fills in the shipping address.
6. User fills in the online payment details.
7. User furnishes the payment and checks out.
8. Website acknowledges the user of the payment and products purchased through email and SMS.
9. Finally, products are delivered to the dispatch address.

11. How will you setup privacy options in a browser?

To clear personal data from a web browser such as Google Chrome, launch the browser.

- Click Tools Menu > Settings
- You can make changes in Privacy settings by scrolling down and clicking **Advanced** option and apply privacy settings according to your preferences.

12. How will you clear your browsing history?

To clear personal data from a web browser such as Google Chrome, launch the browser.

Click Tools **Menu** > **More Tools** > **Clear Browsing data**.

13. What is the significance of first aid?

First aid kit is a set of basic tools and medicines which are useful in providing instant relief to the victim until real help arrives. It is a must for all kind of workplaces because in absence of a first aid kit a victim who could be saved might succumb to the injuries.

14. What is the significance of a browser on WWW?

Browser is the software application that allows us to visit websites on Internet. The URL of the website is type in the browser's address bar. Once the web site is connected, browser displays its home page from where we can navigate further by clicking on various hyperlinks. Website is a collection of webpages which are displayed by the browser.

15. How will you open, modify the republish your blog post in MS Word?

- Open MS Word 2013
- In Blog group under Blog Post tab, click on Open Existing option.
- In Open Existing Post dialog box, your online posts will be listed. Select the desire post and click OK.
- Selected post will be opened for editing. Make changes and publish it again.
- Once your blog is ready to publish. Click Publish option in Publish drop-down in Blog group of Home tab

16. What is the importance of safety at workplace?

As we learnt that workplaces are mostly dynamic in nature and depending on that, their environment varies. Certain workplaces are quiet and less crowded while some workplaces are noisy and crowded. For different workplaces there are different safety threats. A safe working environment ensures better work performance.

17. What is a first aid kit? What is its significance? What are the contents of a standard FAK?

First aid kit is a set of basic tools and medicines which are useful in providing instant relief to the victim until real help arrives. It is a must for all kind of workplaces because in absence of a first aid kit a victim who could be saved might succumb to the injuries. A standard first aid kit includes Plasters in different sizes and shapes, sterile gauze dressings, bandages, safety pins, small scissors, cleansing wipes, thermometer, antiseptic cream/ liquid, painkillers, other common diseases pills, small torch.

18. Describe computer related ergonomics?

While working on the computer the first and foremost is posture which needs to be correct. Proper sitting, suitable chair and its height, elbows must rest parallel on the arms of the chair, positions of neck and shoulder should be relaxed, correct angle of wrists while using keyboard and mouse, suitable distance of eyes from the monitor, proper brightness of the monitor, right angle of knees and use of foot rest are some of the common ergonomic issues related to using a computer.

19. List the 8 preventive measures of accidents (do not describe them).

Accidents can be prevented by alertness and being careful. Common preventive measures against accidents at workplaces are:

1. Safety guidelines, rules and their communication to all the people involved.
2. Conspicuous warning signs, directions, safety tips and indicators for diversions.
3. Trained and efficient housekeeping with suitable guidelines and rules for safety while working.
4. Check on unauthorised access with the help of ID cards, security checks, digital swipe cards, fingerprint scanners, CCTV cameras, alarm systems etc. and need-to-access security policies.
5. Safety guidelines for specific operations at production floors and careful operation of the equipment.
6. Risk assessment for potential dangers and possible losses to help in devising effective preventive safety measures.
7. Employing trained and skillful personnel ensures that major safety guidelines are taken care of.
8. Discipline, alertness, and positive attitude of the people.

20. How should you follow healthy living as a growing teenager?

We can follow a regime of regular exercises, yoga, good reading and meditation to keep mental stress at bay and develop a positive mind set. Play some sort of sports, jogging and gym for physical exercise or games like chess for mental fitness. Healthy eating and having some sort of discipline in eating brings out good physical results and improves personality. Observe good human values and positive perspective.

21. How do sports and basic human values help in healthy living?

We play sports for recreation as well as to keep fit. Sports also keep us stress free and enhance our personality. Sports influence our attitude positively. Game like chess, sudoku etc. improve mental faculties. Basic human values such as humility, respectfulness, respecting other's perspectives, being considerate, developing civic sense, clean and good habits make us strong from inside and develop a positive outlook.

D. Answer the following questions – 5 marks each.

1. How will you setup visual feedbacks to appear on the screen instead of sound?

- Click on **Start**.
- Click on **Control Panel**.
- Click the **Ease of Access** link.
- Click **Ease of Access Center** link.
- Click on **Use** text or visual alternatives for sounds in **Ease of Access Center**.

Sound Sentry or **Turn on visual notifications for sounds** option replaces system sounds with visual warnings like flashing caption bar of active window, flashing the active window itself and flash desktop. Select the desired visual warning.

Any sound that reads the screen can be turned into text caption that appear on the screen by checking **Turn on text captions for spoken dialog** checkbox.

2. Explain the use of read aloud feature and Magnifier or Zoom for visual impairment.

Read aloud feature allows read aloud of any text on the screen and Turn on Audio Description option lets visually impaired person hear descriptions of what is happening in any videos.

Magnifier or Zoom lets user move mouse pointer on the screen and see the objects larger in size. This mode is called lens mode. In docked mode a portion of the screen can be left magnified and rest of the screen remains normal. This portion can be changed as required. Full screen mode magnifies whole screen. Lens size, focus area, zoom level etc. can be set by the user.

3. Why do we need to network computers together? How is LAN different from MAN?

The purpose of connecting computers to form a network is to share the data, services and various resources.

Advantages of networking

- **Data Sharing:** One of the most important uses of networking is to allow the sharing of data. Users can send text files, spread sheets, documents, presentations, audio files, video files, etc. to other users.
- **Hardware Sharing:** Hardware components such as printers, scanners, etc. can also be shared. For example, instead of purchasing 10 printers for each user, one printer can be purchased and shared among multiple users thus saving cost.

- **Internet Access Sharing:** You can purchase a single Internet connection and share it among other computers in a network instead of purchasing multiple Internet connection for each computer. This is very commonly found in Internet café (browsing centres), schools, colleges, companies, etc.
- **Usage of network-based applications** such as web browsers, email clients, chat application, audio & video calling, etc is another advantage.

Local Area Network (LAN) - A Local Area Network (LAN) covers a small geographic area, such as home, office or any building. These are used within smaller geographic range and have limited communication lines. LANs have higher data transfer rate. It is useful for sharing resources like files, printers and other applications. A LAN can be set up using wireless media also.

Metropolitan Area Network (MAN) - A Metropolitan Area Network (MAN) is a large network that usually spans a city, but does not extend the boundaries of the immediate town, city, or metropolitan area. Data transfer rate in Metropolitan Area Network is little slower than the Local Area Network. The distance covered by this kind of network enables a large number of users to communicate with each other in the network. For example, network set up by MTNL in Delhi and Mumbai, cable TV network in a city.

4. **Write short note on types of internet connectivity.**

Some of the commonly used Internet connectivity are:

Dial-up: Dial-up Internet access is a form of Internet access that uses the facilities of the public switched telephone network (PSTN) to establish a connection to an Internet service provider (ISP) via telephone lines using a device called MODEM. Dial-up connections are extremely slow.

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WiMAX: Worldwide Interoperability for Microwave Access is a wireless communications standard designed to provide mobile broadband connectivity across cities and countries through a variety of devices.

Wi-Fi: Wi-Fi is a popular technology that allows an electronic device such as computers or mobile phones to exchange data wirelessly over a network, including high-speed Internet connections. Wi-Fi devices such as personal computer, smartphones, video game console, etc. can connect to a network resource such as Internet through a device called the Wireless Access Point.

5. **What are the advantages of instant messaging? How will you begin chatting on an online instant chatting website or service? What is a blog? List some popular blog sites.**

Instant messaging (IM) is a form of communication over the Internet that offers an instantaneous transmission of text-based messages from sender to receiver. Most instant messaging software include the option for performing file transfers, audio chat, video calling and conferencing, sharing desktops, etc. apart from standard text chat. Instant messaging software is widely used for personal and commercial use. In this session, you will be introduced to the concept of instant messaging, the steps to create an instant messaging account and also work with instant messaging software.

Unlike email, instant messaging happens in real-time and the response from participants can be spontaneous. Some instant messaging software allows users to view messages received when they are not logged on. These are called "Offline Messages".

To use Google Hangout, login to your Gmail account. You will see your hangout connections on the right-hand side as shown here. To begin conversation, follow the steps below:

1. Click on Search button to search and send the chatting request to someone, who is online.
2. Type the name or email address of the person and press Enter key.
3. If the person or email address is found, the name and profile image appear on the left pane and chatting window appears on the right of the window. Here you can start text chatting.

A blog is a discussion style site used by non-technical (and technical users) users for creating personal web pages. Blogs are similar to an online personal diary and simple to use.

You can use a blog to convey messages about events, announcements, news, reviews, etc. Blogs are usually managed using a web browser and this requires active internet connection. You can also use offline blog software

to create content first and later publish the content when an active internet connection is available. There are hundreds of websites that offer blog service for free. Some of the popular blogs include:

- www.WordPress.com
- www.blogger.com
- www.blog.com
- www.weebly.com
- www.blogsome.com

6. How will you open, modify and republish your blog post in an offline blog editor?

- Open Qumana by clicking **Start > All Programs > Qumana > Qumana** or by clicking Qumana shortcut on the desktop.
- On first start, mention your blog's address in **Add Blog Wizard** and click **Next**. It will automatically locate your blog.
- Enter login credential of your blog site and click **Next**.
- Blogs on your site will be listed. Select the blog you need to work with and click **Finish**.
- Qumana interface will open up listing your blog posts.

In the list of your blog posts, double click on the one you wish to edit. It will open up in the editor.

Make changes in your post in the editor. You can use formatting toolbar. If you have basic knowledge of HTML, you can insert content with HTML using **Insert HTML** button at the top. **Insert Ad** button lets you insert advertisement in your post page. Once changes are done, click on **Save** button to save your post offline on your computer.

To publish changes to your blog site, click on **Update Post** button.

Qumana will take a while and publish the changes to your online post.

7. How will you book a train ticket from your city to another using IRCTC website? How will you check the booking history of your ticket?

Open the browser and go to IRCTC website: <https://www.irctc.co.in>

On website's home page, fill in the details of your journey like cities to travel from and to, date of journey and preferred travel class. Then, click on **Find trains**.

You can login into IRCTC account which you may have created earlier. Registering on IRCTC is the same standard process as on any other public services website. To login, click **Login** option in the drop-down menu on top right corner.

The trains will be listed. Click on **Check Availability** to check the seats available. You can change the travel class to check seats for other classes.

Once you decide to book a seat, click on **Book Now**.

On the next screen, fill the passenger details as shown here. If you have passenger details already saved in the website then you can pick up details by clicking **My Saved Passenger(s) List**. To add more passenger details, click on **Add Passenger**.

Scroll down, fill in mobile number and captcha details and click Continue Booking. Review booking page will appear. When sure, click on **Continue Booking**.

On payments page, select the suitable payment option for example Net banking, select the Bank and click on **Make Payment**.

This will take to the payment portal. Furnish the payment and your ticket will be displayed to download and print.

Viewing Transactions

In the main menu, click on **MY ACCOUNT** and hover mouse pointer on **My Transactions**. You will see choices namely Booked Ticket History, Failed Transaction History, Ticket Cancellation History. You can select the desired choice.

8. What are the best practices about internet security

Following are the best practices one must follow for internet security:

- Use strong passwords
- Regular Data Backup
- Encrypt Data
- Secure your username and password
- Do not share personal data
- Secure transactions

- Use antivirus and antispyware software
- Clear browser cookies frequently
- Install firewalls
- Never install software from unknown sources
- Remove unwanted or unknown software applications

9. How will you clear your browsing history and cookies?

To clear personal data from a web browser such as Google Chrome, launch the browser.

Click **Tools Menu > More Tools > Clear Browsing data...**

The next window will show various options to clear Browsing History, Cookies and Cache.

10. What are various types of workplace emergencies? Describe any 2.

Various workplace emergencies are Work-specific, equipment related, natural calamities civil or behavioural and health related.

Health related emergencies are common at dangerous work environments like chemical plants, mines, oil-rigs and medical research labs etc. Workers in factories may be exposed to smoke, poisonous gases, extreme heat, extreme cold, radiations, intense lighting, high decibel noise and extreme physical exertion. Careful, efficient and regular safety measures can only protect workers from the impending harm.

Equipment related emergencies like sudden injury, cuts or bruises; body-part or cloth stuck in the machinery, accidents related to turbines, boilers and chemical plants; crashes and accidents by moving objects – vehicles, lifts, trolleys and carts etc.

11. How can we prevent common accidents at workplace?

Accidents can be prevented by alertness and being careful. Common preventive measures against accidents at workplaces are:

1. Safety guidelines, rules and their communication to all the people involved.
2. Conspicuous warning signs, directions, safety tips and indicators for diversions.
3. Trained and efficient housekeeping with suitable guidelines and rules for safety while working.
4. Check on unauthorised access with the help of ID cards, security checks, digital swipe cards, fingerprint scanners, CCTV cameras, alarm systems etc. and need-to-access security policies.
5. Safety guidelines for specific operations at production floors and careful operation of the equipment.
6. Risk assessment for potential dangers and possible losses to help in devising effective preventive safety measures.
7. Employing trained and skillful personnel ensures that major safety guidelines are taken care of.
8. Discipline, alertness, and positive attitude of the people.

12. As an individual how can we can take care of our health to stay fit?

We can follow a regime of regular exercises, yoga, good reading and meditation to keep mental stress at bay and develop a positive mind set. Play some sort of sports, jogging and gym for physical exercise or games like chess for mental fitness. Healthy eating and having some sort of discipline in eating brings out good physical results and improves personality. Observe good human values and positive perspective.

13. Describe some safety issues at school and how to prevent them?

Schools have certain areas which are accident prone such as science labs and playground. Science labs have threats of fire, chemical spillage and getting wounded by careless handling of equipment. In the playground, especially for kids, various swings may be the cause of harm if students rush or ride them in improper way. Suitable guidelines, strict checks and thorough discipline can prevent accidents in these places. Teachers and additional personnel can be delegated the task of vigil and monitoring. Suitable first aid facilities and access to call help should be in place.

14. Describe some common safety hazards.

Some common workplace safety hazards are related to the following items or factors:

Ergonomic: Incorrect posture, prolonged work hours, improper use of equipment cause harm to muscles and body joints.

Work environment: Noisy workplaces, poor lighting, over-crowded places, poor work ethics, poor work policies and underpaid jobs cause distress, physical ailments, and psychological disorders.

Chemical and physical: Exposure to hazardous chemicals and radiations leads to poisoning and skin, respiratory and vision-related harms. Places dangerous for human life, accidents, electrocution, fire outbreaks, flooding etc. are also some workplace hazards.

15. What are some health hazards at workplaces?

Nature of work and workplace environment affect the health of the workers. Due to work-specific environment workers may get exposed to different kinds of health hazards such as poisonous gases, harmful radiations, inflammable materials etc., sewage cleaners lose their lives due to poisonous gases and deep running smudge. At hospitals, staff comes in direct contact of the patients with infectious diseases, people working in refineries, chemical plants and dye industry tend to get their respiratory system infected with hazardous chemical, tiny dust particles and general air contamination, extreme temperatures may cause discomfort or danger to physical health. People working behind desks with least or zero physical movement are prone to ailments related to heart, backbone and neck. Minimised physical activity takes a toll on the physical fitness. Long durations of standing (shopping mall, food joint), too much physical movements such as by salespersons, traffic policemen, waiters etc.

16. Describe the 3 countermeasures to hazards.

Accidents can be prevented by alertness and being careful. Common preventive measures against hazards are:

1. Safety guidelines, rules and their communication to all the people involved.
2. Conspicuous warning signs, directions, safety tips and indicators for diversions.
3. Safety guidelines for specific operations at production floors and careful operation of the equipment.

17. What is the significance of evacuation procedure?

In the event of any emergency such as fire, flood or any such disaster, an emergency evacuation procedure is a must to ensure that everyone at the workplace is evacuated to safety with least harm possible. Workplaces should set their own standard policies for handling workplace emergencies. Employees should be made aware of the policy and procedures of emergency evacuation. Evacuation plan reduces the panic among the people and helps them use their heads instead of adding to chaos. It also helps in eliminating or minimising the risk to injury and life.

18. Write brief note on proper use of keyboard, mouse, and monitor.

Keyboard: Your neck and shoulder should be relaxed and upper arm & elbows should make a little more than 90° with a straight wrist.

Mouse: Mouse should not cause pressure on the wrist and keep it closer to the keyboard. Elbows should be bent and closer to the body and avoid bulky mouse.

Monitor: Monitor should be placed at a distance anyway between 18 and 30 inches. Eyes should be