



Answer Key

Artificial Intelligence Ver. 2.0

Part A: Employability Skills

1. Communication Skills-II



Task (Page 31)

1. The main elements in this communication cycle are sender, message, channel and receiver.
2. Examples of:
 - Verbal Communication: Talking on a phone, public communication
 - Written communication: Letters, Emails
 - Visual communication: Training and educational videos, Conferences
 - Non-verbal communication: Eye Contact, Facial Expressions
3. Positive feedback
4. One advantage of public communication is:
Clear and precise message is delivered to the receiver, so there are less chances of discrepancy in the delivered message.



Reboot (Page 34)

1. The different types of barriers in an effective communication are:
 - a. Physical Barrier
 - b. Linguistic Barrier
 - c. Interpersonal Barrier
 - d. Organisational Barrier
 - e. Cultural Barrier
2. Inadequate flow of information amongst employees working at different levels of hierarchy may lead to organisational barriers.



Task (Page 36)

- | | |
|-------------------------|-----------------------|
| 1. I wash clothes. | 2. I play with water. |
| 3. I study a newspaper. | 4. I swim in water. |



- | | |
|--------------------------------------|------------------------------------|
| 5. I eat a banana. | 6. I drive a car. |
| 7. Sneha washes clothes. | 8. Sneha plays with a book. |
| 9. Sneha studies a newspaper. | 10. Sneha swims in water. |
| 11. Sneha eats a banana. | 12. Sneha drives a car. |
| 13. The teacher washes clothes. | 14. The teacher plays with a book. |
| 15. The teacher studies a newspaper. | 16. The teacher swims in water. |
| 17. The teacher eats a banana. | 18. The teacher drives a car. |
| 19. The driver washes clothes. | 20. The driver plays with a book. |
| 21. The driver studies a newspaper. | 22. The driver swims in water. |
| 23. The driver eats a banana. | 24. The driver drives a car. |
| 25. The cook washes clothes. | 26. The cook plays with a book. |
| 27. The cook studies a newspaper. | 28. The cook swims in water. |
| 29. The cook eats a banana. | 30. The cook drives a car. |
| 31. Rishit washes clothes. | 32. Rishit plays with a book. |
| 33. Rishit studies a newspaper. | 34. Rishit swims in water. |
| 35. Rishit eats a banana. | 36. Rishit drives a car. |
| 37. You wash clothes. | 38. You play with water. |
| 39. You study a newspaper. | 40. You swim in water. |
| 41. You eat a banana. | 42. You drive a car. |

These are all the possible sentences using the given subjects, verbs, and objects.



Task (Page 37)

- | | | |
|------------------|--------------------|------------------|
| 1. Direct object | 2. Direct object | 3. Direct object |
| 4. Direct object | 5. Indirect object | |

Exercise



Unsolved Questions

Section A (Objective Type Questions)



Quiz

- | | | | | | |
|---------|------|------|-------|-------|-------|
| A. 1. c | 2. a | 3. c | 4. c | 5. d | 6. a |
| 7. b | 8. a | 9. d | 10. b | 11. a | 12. d |



- B.** 1. Communication 2. Receiver 3. Non-verbal
 4. Communication 5. Decoding 6. Feedback
 7. Communication 8. Descriptive 9. Non-Descriptive
 10. linguistic
- C.** 1. False 2. True 3. False 4. True 5. True
 6. True 7. True 8. True 9. False 10. False

Section B (Subjective Type Questions)

- A.** 1. Verbal communication is the most popular form of communication where the transmission of messages occurs with the usage of words that can be in oral spoken or written form. It includes sounds, words, and speech. It is often used during presentations, video or tele conferences, informal or formal telephone calls, discussions, lectures, public speaking, meetings, etc.

Examples where it is more effective are: Conversation between teacher and parent during parent-teacher meeting, a student writing a leave application to the principal, an interview of a candidate with a panel of people, etc.

2. Three skills of mastering verbal communication are:
- Maintain eye contact, stand straight and be attentive. Proper body language will bind the interest of the receivers and the information will be delivered with great impact.
 - Be authentic in your communication. People are often attracted to someone who speaks from the heart and is genuine, transparent and real.
 - Be a good listener and give your ear to your audience to know their viewpoint, as that will help you carry your conversation in a required direction.
3. A communication cycle is incomplete and irrelevant without feedback. Feedback is a response of the receiver with respect to the message received from the sender. It works as an indicator for the successful transmission of the message thus making communication a two-way process.

Examples of feedback are:

- "Congratulations! Keep it up."
 - "Listen, You people cannot go inside without a ticket."
 - "The report needs more focus on the marketing areas and data analysis charts."
 - "The article you submitted for the school magazine is very well written and I like the way you portrayed the image of a girl child facing social injustice."
4. • **Positive feedback** focuses on the sender's strengths, achievements or successes. It also takes care of the areas of improvement and creates a positive attitude for the sender. For example: "Nice work done by you".

"You were really good on stage but if you work more on your voice modulation, then you can do wonders".

- **Negative feedback** it highlights the weaknesses and problems of the information that the sender has conveyed to the receiver. It should be genuine or true to bring a positive change in the process of communication.

For example: "You did not submit your assignment". "You wrote your answers very badly".

5. Specific feedback focuses on the specific points of utmost importance and should be conveyed to the sender. Following are the specific feedback given by a teacher to her students:

"The article you submitted for the school magazine is very well written and I like the way you portrayed the image of a girl child facing social injustice."

6. Feedback is important in communication because:
 - a. It completes the whole process of communication where the sender sends the information and the feedback is the response of the receiver.
 - b. It helps in evaluating the effectiveness of communication. Sender gets a clear picture through the feedback that the information intended to be understood by the receiver is a success or a failure.
 - c. It is an important step that helps in the collection of information from the receiver.
7. Informal feedback is most of the times spontaneous oral feedback that does not follow any specific pattern or predefined blueprint.

For example: "Hi! Your son has done really well this time in exams."

"Listen, You people cannot go inside without a ticket."

8. **Direct Objects:** Direct objects come after a verb and are directly 'acted on' by the verb. It answers the question "what?" or "who?".

For example: She sang on Annual day. Peter doesn't like Maths.

Indirect Objects: Indirect object is the recipient of the direct object. It answers the question "to whom?", "for whom?".

For example: She bought her daughter a new dress.

9. It is important to learn different parts of speech to understand the language well to help you construct good sentences for effective communication.
10. • **Noun** is a word to name a person, place, thing or an idea.

For example: Goa is a beautiful place.

My pen is broken.

- **Pronoun** is a word that replaces a noun. They are used to avoid the repetition of nouns so that the sentences are smoother and effective.

For example:

Words are: I, she, her, you, himself, some, we, you, each, who, which, that, mine, yours, his, her



Pronoun in a Sentence: She likes to play in the sand on the seashore. How can you drive yourself with an injured hand?

B. 1. Two elements of a communication process are as follows:

Sender: Sender is a person or entity who starts the communication process. He will convey a message with the purpose of passing meaningful information/ideas to others involved in the communication cycle.

Receiver: An individual or a group receiving a message is called receiver.

2. a. **Cultural barrier:** As mindset of people of different cultures are different, so is their language, signs and symbols. This causes a barrier to communication.
 - b. **Physical barrier:** If the temperature of the surrounding is either too hot or too cold, then the working environment will not be comfortable.
 - c. **Linguistic barrier:** An English person traveling to Japan will not be able to interact with Japanese if he doesn't know Japanese.
 - d. **Interpersonal barrier:** strict rituals of people living in certain geographical area.
 - e. **Organisational barrier:** a formal communication protocol is always followed when communication takes place between senior and his subordinate. In such situations, a subordinate employee will always have a fear, anxiety and withdrawal in communication.
3. Three principles of effective communication are:
- **Principle of Clarity in Ideas:** The sender should be clear as to what needs to be conveyed through the process of communication. The message should be clear and precise in an understandable form.
 - **Principle of Appropriate Language:** The language of the message should be simple. There should be no hidden meaning. Avoid using inappropriate and symbolic words that may lead to miscommunication.
 - **Principle of Attention:** The message should be designed in such a way that the receiver is not forced to pay extra attention. The content of the message should be made keeping in mind the interest of the receiver.
4. Two examples of physical barrier are:
- Sometimes, long-distance communication using e-mail, fax, telephonic conversation may not be functioning properly due to bad weather or internet connectivity issues.
 - Working environment may not be comfortable due to unhealthy surroundings, poor infrastructure, untrained staff, etc. This also hinders the performance of the employees.
5. Inadequate flow of information amongst employees working at different levels of hierarchy may lead to organisational barriers. Examples are:
- Absence of certain facilities like a comfortable working environment, telephone, fax or internet connectivity, suitable temperature, sufficient tools, stationery and healthy relationships with the co-worker may affect the efficiency of employees and hinder the process of communication.

- Poor coordination amongst the employees due to complex organisational structure will lead to filtering and misinterpretation of the information.

6. **Complete:** The message should include all necessary information and should be complete in all respects for effective communication.

Courteous: The content of the message should be respectful, friendly and honest. The sender should not hurt the receiver through the message and at the same time the feedback given by the receiver should not affect the feelings and sentiments of the sender.



8. a. • **Encoding:** It is the process of converting the message into a form which only the intended receiver can understand by converting the actual message into symbols, words, actions, diagrams.

• **Decoding:** It is the interpretation of the message delivered by the sender.

b. • **Verbal communication** is the most popular form of communication where the transmission of messages occurs with the usage of words that can be in oral spoken or written form. It includes sounds, words, and speech. It is often used during presentations, video or tele conferences, informal or formal telephone calls, discussions, lectures, public speaking, meetings, etc.

• **Non-verbal communication** is defined as communication through physical and physiological cues without using spoken or written words. The information is transmitted using body language, touch, facial expressions, symbols, signals, etc. Most of our communication with the people around us throughout the day is non-verbal and most of the time we are not aware of it. It is helpful when trying to understand others' thoughts and feelings.

9. a. **Advantages of Verbal Communication:**

- Clear and precise message is delivered to the receiver, so there are less chances of discrepancy in the delivered message.
- The information conveyed can be saved for future use by recording the verbal or written communication.

Disadvantages of Verbal Communication:

- Language has different dialects or speech tone that lead to difficulty for the receiver to understand the message conveyed by the sender.
- Lengthy messages (written or oral) are difficult to comprehend, is unsuitable and boring especially in a crowd.



b. **Advantages of Non-Verbal Communication:**

- It is useful and easy method of communication where no common language is required to master.
- It is a fast method of communication as gestures have more impact than words.

Disadvantages of Non-Verbal Communication:

- Since it uses gestures, facial expressions, eye contact, touch, sign, sound etc. for communication, there are chances of misinterpretation of the message required to be delivered.
- Different cultures use different ways of non-verbal communication. The difference in message can lead to negativity and offense. For example, people who speak less and are less interactive are considered cold and arrogant. However, the Japanese admire silence and consider it as a key to success.

c. **Advantages of Visual Communication:**

- It enhances the other forms of communication for better understanding of the information conveyed.
- There is no prerequisite of learning a specific language and can be used by people in different geographical areas with different cultures.

Disadvantages of Visual Communication:

- It is an expensive medium of communication as it requires the additional cost and time for designing and printing pamphlets, posters, pictures etc.
- It is a time-consuming process as designing and decorating takes more time than writing or conveying orally.

10. **Parts of a Sentence:** A sentence is made up of:

- **Subject:** A subject is a noun that refers to a person, place or thing.
- **Verb:** It is the action done by the subject.
- **Object:** It is a person, place or thing that receives an action and gets affected.

For example: He drove a brand new car. **Subject:** He **Verb:** drove **Object:** new car.

My mother cooks wonderful food. **Subject:** My mother **Verb:** cooks **Object:** wonderful food.

11. A paragraph is a collection of relevant sentences with a common theme. It begins with an introduction of a theme, followed by sentences describing a theme and ends with a statement supporting a common idea.

Rules for writing a paragraph:

- It begins on a new line.
- The first line has an indentation.
- It focuses on a main theme.

C. **Competency-based/Application-based questions:**

1. Factors responsible for internal barriers are:

- Withdrawal or lack of being in touch for communication.



- More engaged in leisure activities that involve only self and not others.
 - Poor self-esteem or social anxiety.
 - Strict rules and regulations of school environment where students need to be less interactive and more formal.
2. A regular follow up and review of the communication is important for appropriate actions. Such follow up helps in removing barriers in effective communication. Try to communicate in person as much as possible to avoid misinterpretation of the information. He should keep taking feedback of his brother to acknowledge what he has understood.
 3. Some tips which he should follow while addressing the audience are:
 - Clarify the idea before communication
 - Communicate according to the need of the receiver
 - Be aware of language
 - Be an active listener
 - Respect the cultural difference

To use body language to complement your speech. Do the following:

- Do not turn your back towards your audience.
 - Do not sit with your arms and legs crossed. It shows you are not interested in the conversation.
 - Don't be overconfident in your expressions and your tone.
 - Do not lean on the wall or any other object near you.
 - Do not lean forward or backward while sitting.
 - Do not fidget with the objects like paper, pen, etc. around you. It shows you are bored and avoiding the conversation.
 - Do not roll your eyes around or stare.
 - Do not hold a book or anything in front to block the view.
4. It is important to have good communication skills because effective communication skills help you deliver a clear and precise message without altering its actual meaning. It is a very important skill that helps you develop strong relationships with the people around you in your school and at home.



2. Self-Management Skills-II



Task (Page 54)

1. Some of the common signs of stress are:
 - Lack of sleep
 - Frequent headaches
 - Loss of appetite
 - Memory loss
 - Feeling overloaded and depressed
 - Restless and anxiety
 - Frequent mood swings
 - Loss of interest and focus
 - Social withdrawal or isolation
2. Stress is a short term or long-term response of the body due to physical, emotional or psychological changes in us. It triggers fight or flight response to handle different situations in our life. It can be due to illness, exam pressure, loss of job, fight with somebody, stage fear, public performance etc.
3. Some of the basic needs for stress management are:
 - To Maintain good health.
 - To Improve efficiency at home and in the professional place.
 - Balance your mood swings to maintain good mental health.
 - Boost up your immune system to protect vital systems of the body.
 - To have healthy relationships with people around you.



Task (Page 58)

1. A good sleep helps you manage your stress you had through a tough day. It rejuvenates the mind and body, improves your concentration power, regulates your mood swings and sharpens your brain for better decision-making power. Sleep is so important that irregular sleeping patterns or slight sleep deprivation can bring irritation in your behaviour and cause severe mood swings.
2. Meditation is an age-old practice that produces a deep state of relaxation and helps you focus on one thought and clear the others. It works to reverse the effects of stress by providing the rejuvenation and repair of the mind and body. Thus, preventing further damages from the physical effects of stress.
3. Some of the advantages of working independently are:
 - **Increased Focus:** Since you are accountable for your work without any supervision then there are less chances of competition and outside distractions. The result of your efforts is more important than your methodology to complete the assigned work. All these points increase your efficiency and you can easily focus on your task.



- **Making Progress on Assignments:** The progress of the assignment is totally a transparent process for you. If you plan well and with the best of your abilities, you can easily monitor the progress of your assignments.
- **Working at Your Own Pace:** You can set the pace of working on assignments by focussing on short term and long term goals separately.
- **Can Work Remotely:** Since you are not working under any supervision then working hours can be flexible and the place of your work can be remote or any other that helps in increasing your efficiency.
- **Better Job Satisfaction:** Since this kind of working is your choice so you show your full productivity and with the positive results you get better job satisfaction.



Task (Page 59)

Do Yourself.



Reboot (Page 61)

1. Self-regulation is the ability to keep your emotions and your behavior in check and think reasonably before putting it into action. It leads to responsible and value driven behaviour by keeping in mind the long term consequences of your uncontrolled behaviour.
2. a. Find Your Strengths
b. Set and Focus on Your Goals
c. Develop a Plan to Achieve Your Goals
d. Stay Loyal to Your Goals

Exercise



Unsolved Questions

Section A (Objective Type Questions)

Quiz

- A.** 1. c 2. b 3. d 4. c 5. d 6. b
- B.** 1. Stress 2. anxiety 3. Eustress 4. Financial stress 5. Yoga
6. negative 7. likes, dislikes 8. self-aware, self-monitored, self-correcting
9. Independently 10. Ability to work independently
- C.** 1. True 2. True 3. False 4. True 5. True
6. True 7. True 8. True 9. False 10. True



Section B (Subjective Type Questions)

- A. 1. Stress Management is a method or a technique used to make changes in your lifestyle, thoughts, emotions that help you relax your mind and body to minimise the effects of stress.

Two methods for managing exam related stress are:

- **Time Management:** When you feel that there is too much to do and not enough time then you start getting panic attacks, lose focus and make errors in your work. Good time management techniques will help you prioritize your task and managing your commitments. Make a list of the work in terms of urgent, important, not important. This will put you in control of your situation and help you increase your productivity.
 - **Physical Exercise:** Physical exercise in the fresh air increases the flow of blood and oxygen in the body. This will help in releasing good hormones and will make a healthy mind and body. It can be in the form of going out for a walk, physically active at home by helping in the household chores, walking uphill, jogging or running, aerobics, etc.
2. To manage all types of stress in life remember the ABC of stress management originally created by psychologist, Dr. Albert Ellis. This technique helps you analyse the three aspects of a situation that causes stress:
- A:** Adversity or the stressful event.
- B:** Beliefs or the way you respond to the event.
- C:** Consequences of actions and outcomes of the event.
3. The practice of yoga involves stretching the body and forming different poses while keeping breathing slow and controlled. This will relax the body and energize it at the same time.
4. Five symptoms of stress in our body are following:
- Lack of sleep
 - Restless and anxiety
 - Frequent headaches
 - Frequent mood swings
 - Loss of appetite
5. The advantages of self-regulation are as follows:
- Manage your energy levels.
 - Understand your emotions and behaviour.
 - Balance your thoughts and emotions.
 - Understand your long term goals.
 - React in a positive way in difficult circumstances.
 - To be happier by controlling your emotions.

- B. 1. Good stress also known as “eustress” occurs when we are excited. Our heart beats faster and we feel a rush of hormones in our body but it is not dangerous for us. We also feel this good

stress before a public performance, ride in water parks, when the exam result is declared. This kind of stress keeps us lively and excited in life. So in the short term, stress can have a positive impact on us and our behaviour.

2. My favorite stress management technique is positivity because negative thoughts reduce good hormones and bring depression and anxiety. It has also been proven scientifically that we should always smile no matter what the situation is. Even a fake smile will help to reduce heart rate and blood pressure during stressful situations.
3. It is important to be self-aware because:
 - Improve your skills by recognizing your passion and your commitments in life.
 - Channelise your energy in your favour with full productivity.
 - Focus on your weakness.
 - By giving you happiness with the credibility of your work.
 - Bring good leadership qualities at the workplace.
 - Manage your emotions and behaviour to strengthen your relationships in personal and professional life.
 - Decrease your stress level by identifying your likes and dislikes related to tasks.
4.
 - **Internal/Intrinsic Motivation:** Intrinsic motivation is related to what we want to do. It is doing something with fun which makes you happy and is totally interesting for you. It gives you pleasure and feel good. For example, doing gardening, taking part in inter school debate, going for a morning walk, playing with the kids in the park, and doing painting in your free time.
 - **External/Extrinsic Motivation:** Extrinsic motivation is related to what we have to do. It is doing something that gives you rewards or avoids getting punishments. The reward can be money, post, marks, goodwill, etc. For example, doing a part time job to earn money, going everyday for coaching to clear an upcoming competitive exam with good results.
5. Time management is the ability to utilise your time effectively so that you are able to do the required task at an appropriate time. It helps you focus better on important tasks, which leads to better efficiency. It gives you a feel that you are never running against time. You are able to finish your work with less effort and make the most of the limited time you've got. Examples are: Writing down the deadlines for projects, or for tasks that are part of completing the overall project, checking your submission deadlines and start working on the assignment whose deadline is close.
6. Keep a track of your time you spend in your daily life. This way you will waste less time on unwanted activities. You will be able to analyse the level of achieving your short term and long term goals at the end of the day.



C. Competency-based/Application-based questions:

1. She should highlight these skills: self-confidence, self-efficacy, positive thinking, responsible behavior, etc.
2. Do Yourself
3. Some stress management techniques that should be used to manage stress are as follows:
 - **Learning Time Management Skills:** This will help a student to manage his time well. Always design a time table for work allocated. Make short term and long-term goals.
 - **Do Physical Exercise to Keep Your Mind and Body Fit:** No matter how busy you are still keep some time in the evening to play with your friends or involve yourself in some physical activity like badminton, football, aerobics, etc.
 - **Eat Healthy Food:** Always carry a healthy tiffin to school. Eat lots of fruits and vegetables, avoid having junk food, and drink lots of water.
 - **Do Yoga and Meditation Sometimes:** This will help you relax your mind and body. Also, your concentration level will improve with meditation.
 - **Positive Thinking:** No matter what problems you face in life just always remember to ignore life's less pleasant things. Try to find good in every situation. It will have a big impact on your physical and mental health.
 - **Spend some Quality Time with Your Family and Friends:** You will experience less loneliness and so will help you cope up with stress. Being physically present with loved ones creates a strong emotional support to face all the challenges of life.
4. The skills Tarun should highlight to help the students become self-motivated and take charge of their learning are:
 - Push yourself to face the challenges of life.
 - Survive the tough competition in personal and professional life.
 - By giving you happiness.
 - By improving your quality of life.
 - To withstand setbacks and grow as an individual.
 - To believe in yourself and convince yourself to do things as and when put to you.



Lab Activity

(Page 68)

Do yourself



Class Activity

(Page 68)

Do Yourself



3. ICT Skills-II



Task (Page 74)

1. Character User Interface Operating System allows a user to access a computer by giving text based commands. These commands are entered one at a time to get the work done by the computer. It is a time consuming process and has been replaced by a graphical user interface. Examples are DOS, Windows command prompt.
2. Notification area in earlier versions was known as System Tray. It displays the system notifications and the status of the other tasks running in the background.
3. There are three components available in Windows 10 desktop. They are:
 - Icons
 - Desktop background
 - Taskbar
4. Any data in the computer is stored in the form of a file.



Reboot (Page 84)

1. Spam is an unwanted, unsolicited bulk message from companies for advertising, spreading malware or tricking you to visit their insecure websites to take your personal information along with bank details.
2. There are various types of virus. Some of them are:
 - program file virus
 - Boot sector virus
 - Macro Virus
 - E-mail virus
3. Anti-viruses and Firewall will not allow the unwanted data to enter your computer. If by mistake you download any malicious code, then antivirus or antimalware software will warn you and then will remove it from your computer. This way you will be able to protect your data from getting damaged or stolen.
4. Websites that you access should be secured websites to avoid data hacking especially when you do online transactions using your bank details or credit cards. If the site address starts with https:// and a lock symbol, then it is safe to access.



Exercise



Unsolved Questions

Section A (Objective Type Questions)

Quiz

- A.** 1. c 2. b 3. b 4. a 5. d 6. a
7. a 8. a 9. d 10. c
- B.** 1. Shutdown 2. System Tray 3. File
4. File name, Extension 5. File path 6. Folders
7. Computer virus 8. Computer care and maintenance
9. Backup 10. Disk cleanup and disk defragmentation
- C.** 1. False 2. True 3. True 4. True 5. True 6. False
7. True 8. True 9. True 10. True

Section B (Subjective Type Questions)

- A.** 1. Mobile operating systems have Graphical User Interface with menus and buttons supporting different types of apps on Smartphones, tablets, smart watches or other portable devices. It is a combination of an operating system and communication technology. The different mobile OS available these days are: • Android OS • Windows OS
2. Any data in the computer is stored in the form of a file. That is why a file is said to be a collection of logically related data. Every file has its own unique name which is made up of two parts: file name and extension.
- Folder is a collection of related files and subfolders. A sub-folder may contain one or more files and subfolders within. Folders do not occupy any disk space. They point to specific file locations within the file system of the computer.
3. Utility software does housekeeping functions like backing up disk or scanning/cleaning viruses or arranging information etc. They ensure the smooth functioning of the computer. When the system does their backup of your data or checks for malware then you are using utility software.
4. In this type of operating system, the response time plays a very important role. Each job assigned to the computer has to be prioritised and processed within time constraints otherwise the system is considered a failure and processed data will lose its importance. Examples are RT Linux and Lynx.
5. Good care and maintenance plays an important role in the performance of a computer because:



- It helps you detect the hardware or software problems at an early stage before they become serious issues.
 - It prevents the computer from viruses and malwares.
 - It speeds up the processing power of a computer by deleting old unwanted files and applications.
6. Different ways to protect data in the computer are:
- **Use proper passwords combinations for your computer login:** At the time to allocate passwords take care to use the combinations of small letters, upper case, numbers, and special characters like \$, %, &, etc. These combinations are difficult to hack and will be able to save your computer from unauthorised access.
 - **Install Anti-virus and Firewall:** Anti-viruses and Firewall will not allow the unwanted data to enter your computer. If by mistake you download any malicious code then antivirus or antimalware software will warn you and then will remove it from your computer. This way you will be able to protect your data from getting damaged or stolen.
 - **Encrypt Data:** Data encryption is converting the readable data into unreadable encoded form to save it from unauthorised access. Sometimes sensitive data like personal credit card transactions you do in online purchasing or data from defence services need to be transmitted through the internet or any other network should be encoded to protect the information.
7. To remove temporary files in a computer follow the given steps:
- Step 1:** Double-click the **Computer** icon on the desktop.
- Step 2:** In the dialog box that opens select Local Disk (C:).
- Step 3:** Properties option from the Shortcut menu. Select **General** Tab.
- Step 4:** In the General Tab click on **Disk Cleanup** button present on the bottom right side.
- Step 5:** Disk Cleanup Dialog box opens. Put a tick in front of **Temporary Files, Thumbnails**, etc. that you want to delete. Click on **OK** button.
- Step 6:** A dialog box appears where it will ask for confirmation before deleting it permanently. Click on **Delete Files** button. This will delete all the temporary files in your computer.
8. Different ways to keep the hardware components clean are:
- Keep the computer and the area around it dust free by dusting it with a soft, dry cloth at least once a week.
 - Avoid eating or drinking while working on the computer.
 - Cover the computer with a plain cloth along with its physical components when not in use.
9. The backup data can be used to recover the unexpected deleted file. This has become an important process these days in most of the companies and organisations so that their business can continue to function smoothly and their customers do not face problems.

10. In any school, each teacher has a separate cabinet where they keep the files of different students or classes on separate shelves. Similarly, information on a computer is stored in electronic files, which can be put into separate folders. It is easier to manage the electronic files as they can be simply copied, moved, renamed or even deleted.

- B.**
1. a. **Speaker:** This icon looks like a loudspeaker viewed from its side. It allows quick access to your computer's volume settings.
 - b. **Power:** It displays the power cord icon if connected to power otherwise total battery life in % is visible.
 - c. **Network Connection:** It displays the network connectivity status.

2. We can easily add and remove program in this taskbar by following the given steps:

Step 1: Select the program from start menu.

Step 2: Either drag or drop on the taskbar or right click on the program and select "Pin to Taskbar".

3. The most common options available in Start menu are:

Shut Down: Allows the user to turn off the computer

All Programs: Provides access to all installed programs and applications. To start an application, just click it.

Search Box: This allows the user to search a file or folder or run executable files.

Control Panel: This allows the user to change various settings.

4. a. System software is a software which is compulsory for the computer. Without a system software computer is just a dummy without any use.

It is always running in the background of your device and helping the user to smoothly use the computer system. For example: Operating systems like Windows, Mac OS, DOS, etc.

- b. Application software is a set of programs that helps the programmers to perform a specific task. It can be installed on a computer or mobile device depending on the need of the user.

For example: MS word deals with documents, Spreadsheets with calculation, Presentation software for creating and running presentations.

- c. Utility software does housekeeping functions like backing up disk or scanning/cleaning viruses or arranging information etc. They ensure the smooth functioning of the computer. For example: When the system does their backup of your data or checks for malware then you are using utility software.

C. Competency-based/Application-based questions:

1. She can maintain regular backup of data.
2. Multitasking.
3. Neha should use antivirus software
4. Avast or windows defender for windows operating



Lab Activity

(Page 93)

Do Yourself



Class Activity

(Page 94)

Do Yourself

4. Entrepreneurial Skills-II



Task (Page 101)

1. An entrepreneur is a person who makes his own business in an innovative manner and bears all the risk in the hope of gaining much profit and contributing to the economy of the country. Any person with a passion to fulfil his dreams of converting his ideas to real business and dealing with all the risks can become an entrepreneur.
2. The qualities of a successful entrepreneur are as follows:
 - Hard Working
 - Optimistic
 - Independent
 - Energetic
 - Self-Confident
 - Perseverant
3. a. A successful entrepreneur is always a hardworking person. He is always willing to put extra efforts to bring success to his start up. He works with his true spirit as he knows that it is his work and working hard will benefit his business. There is no time constraint for his working hours. He works even on holidays so that his business can flourish.
 b. An entrepreneur is a self-confident person as he believes in his own vision and abilities. His confidence ensures that he is able to overcome his hurdles and challenges he faces every day in his business. He believes in his dreams which brings confidence in his nature and helps him to take important decisions in a convenient way.



Reboot (Page 104)

1. Following are some of the myths/misconceptions about entrepreneurship:
 - Entrepreneurs are born not made
 - All entrepreneurs have great ideas
 - The only requirement is a good idea
 - Businesses either flourishes or fails:



18

Touchpad Artificial Intelligence-X (Answer Key) (Ver.2.0)



IMPRINT 1

- Entrepreneurs take lots of risks:
 - One must know everything and have a good degree before starting a business:
 - A lot of money is required to start any business:
2. The following are the roles of an entrepreneur:
 - Innovator's Role
 - Agent's Role
 - Risk Assumption Role
 - Capital Formation Role
 - Employment Generation Role
 3. Entrepreneurs generate employment for both skilled and unskilled labourers by setting up large- and small-scale businesses. This leads to the reduction in unemployment levels in the country.
 4. Entrepreneurship is a learned skill, not a natural-born ability. It takes immense dedication, discipline, and hard work to become a successful entrepreneur. It involves creating unique business ideas followed by launching and running a new venture.

Exercise



Unsolved Questions

Section A (Objective Type Questions)

Quiz

- | | | | | | |
|-----------|------------------------------|-----------|---------|----------|----------|
| A. | 1. b | 2. d | 3. d | 4. d | 5. d |
| B. | 1. Human Resource Management | 2. Change | | | |
| | 3. Free Market | 4. Enter | | | |
| | 5. Entrepreneurship | | | | |
| C. | 1. e. | 2. a. | 3. b. | 4. c. | 5. d. |
| D. | 1. True | 2. True | 3. True | 4. False | 5. False |

Section B (Subjective Type Questions)

- A.** 1. Following are the entrepreneurial functions:
 - **Organisation Building and Management:** An entrepreneur has to take care of renting or buying a place, hiring employees, organizing the factors of production, sourcing finance etc. At the time of allocating these resources he should be able to manage his funds in a reasonable way to down costs and losses.

- **Risk taking:** Risk taking is an important function of an entrepreneur where he should be taking responsibility for each action he does and planning for a loss or mishap that may occur in the future due to unforeseen situations. Some risks may not pay off, but an optimistic risk-taking entrepreneur will always look at failure as an opportunity to learn.
 - **Innovation:** An entrepreneur uses his knowledge, experience and gathered information to convert his dream into an innovative venture. This can be creating a new product, discovering new markets or new ways of organization of industry.
2. An entrepreneur needs to perform the following managerial functions:

Planning: It helps in smooth and effective running of a business. It focuses on the necessary steps to make business ideas succeed and determine the course of action to achieve short-term and long-term objectives. It finds potential markets for a new venture and reduces the uncertainty related to financial and competitive factors.

Organizing: It involves organizing the resources, finances and work to increase the productivity of a business. It also involves assigning work to people in different departments, creating the levels of authority and reporting so that the work is divided, and the right people should be given the right jobs to reduce redundancy and increase the efficiency.
 3. Two well-known agricultural entrepreneurs are Pramod Gautam and Rajiv Bittu.
 4. • **Entrepreneurs are born not made:** Entrepreneurship is a learned skill, not a natural-born ability. It takes immense dedication, discipline, and hard work to become a successful entrepreneur. It involves creating unique business ideas followed by launching and running a new venture.
 - **All entrepreneurs have great ideas:** It is not always a new idea that makes you an entrepreneur. You can take an existing idea and make your own business out of it. Only it needs a potential idea and a proper execution to become reality.
 - **The only requirement is a good idea:** Only a good idea is not enough to make you a successful entrepreneur. You need resources, capital, a good market to sell your products, things in your favour to make the business happen the way you want.
 5. Social entrepreneurship means doing business in a creative manner to help in the social development of the society. Social entrepreneurship deals with environmental and social issues. They put efforts and take risks to bring positive changes in society.
 6. The difference between misconception and reality are:

Misconception: A myth, or a misconception, is a false belief or opinion about something. For example, if we think tall people run faster than short people, we have a misconception. It is not true. The truth is that short people can also run fast.

Reality: Reality is the state of things as they actually exist, rather than as they may appear or might be imagined. In other words, reality includes everything that is and has been, whether or not it is observable or comprehensible.

- B.** 1. Social entrepreneurship means doing business in a creative manner to help in the social development of the society. Social entrepreneurship deals with environmental and social issues. They put efforts and take risks to bring positive changes in society. Some of the problems taken care by social entrepreneurs are poor quality education for underprivilege, health and sanitation, unemployment, child labour etc.
2. When an entrepreneur runs a business:
- They use their creativity to come up with a new business idea that will fulfill the changing demands of the customer's.
 - They use the available material and people available around them in an innovative way merged with new technology to create new products.
 - They work for the welfare of the society by saving the environment, contributing their money to build new schools and hospitals in their locality.
 - They create jobs by hiring the skilled and unskilled labourers and helps in bridging the gap of unemployment.
 - With the success of an entrepreneur the people connecting to it, all shares the success and thus helps in the overall development of the country.
 - With the increasing competition of the entrepreneurs in the market the products are available at low and competitive cost.
3. Managerial functions performed by an entrepreneur are:
- **Planning:** It helps in smooth and effective running of a business. It focuses on the necessary steps to make business ideas succeed and determine the course of action to achieve short-term and long-term objectives. It finds potential markets for a new venture and reduces the uncertainty related to financial and competitive factors.
 - **Organizing:** It involves organizing the resources, finances and work to increase the productivity of a business. It also involves assigning work to people in different departments, creating the levels of authority and reporting so that the work is divided, and the right people should be given the right jobs to reduce redundancy and increase the efficiency.
 - **Directing:** It is assigning the jobs to the people working in an organisation to increase the productivity of the business and to achieve the predetermined goals. It is a continuous process and takes place at every level of the organization.
 - **Staffing:** It means giving jobs to the suitable person in an organization. This involves planning and recruiting the employees for different departments in an organisation by evaluating their skills and knowledge. It also includes training and development, appraisal and remuneration of workers to maintain a satisfactory workforce in an organisation.

4. Women entrepreneurship means women are turned into entrepreneurs by initiating, organising and setting up production and marketing of the products. Women initially joined the business world with innovative ideas to start small and medium scale ventures such as papad making, pickle preparation, food items, paintings, handicrafts, etc. Nowadays women are successful entrepreneurs in modern technology-based business ventures like tours and travels, business related to IT etc.
5. Every entrepreneur has a different reason to start his own business. Some were sure from the beginning that they wanted to be self-employed and work for themselves. Others after working for fixed hours and fixed salaries as waged employed decided to shift to entrepreneurship. After getting the awareness of the two career choices, it is important to understand how taking the route of entrepreneurship benefits an individual.

A person who becomes an entrepreneur goes through a career process. This process is as follows:

- **Enter:** It means implementing the idea by starting a business and entering a new market. For example, Amit is starting a small stationary store in his locality.
- **Survive:** It means to remain in the competitive market in between other entrepreneurs dealing with the same business. For example, there are many other stationary stores in the area. But still Amit is surviving the competition and does well. He even bought the next-door shop and expanded his small store to make a big fancy stationary outlet.
- **Grow:** It means after attaining a reputation and stability an entrepreneur plans to expand the existing business. For example, after a few years, Amit has opened a chain of three more stationary stores in the same city. He even plans to expand it to other neighboring cities as a new brand.

C. Competency-based/Application-based questions:

1. The qualities of a successful entrepreneur are as follows:

- Hard Working
- Optimistic
- Independent
- Energetic
- Self-Confident
- Perseverant

Rest part do yourself.

2. Do Yourself
3. Do Yourself
4. Do Yourself





Lab Activity

(Page 110)

Do Yourself



Class Activity

(Page 111)

Do Yourself

5. Green Skills-II



Task (Page 116)

1. Goal 4 of the Sustainable Development Goals is Quality Education.
2. There are three major problems related to sustainable development.
3. Two challenges to sustainable development are listed below:
 - A large population in most of the countries is unemployed, living in underprivileged conditions, uneducated and have a fixed mindset and behaviour which is very difficult to change. Though many NGOs and non-profitable organisations with the support from government and international bodies are working to educate them and bring awareness, it has many hurdles and challenges which is not easy and time consuming also.
 - With the existing issues of climate change, the number of species both on land and water has become extinct and many are on verge of their extinction. Under such circumstances striking a balance in the food chain to bring back the balance in different forms of the ecosystem is a big responsibility.
4. The significance of sustainable development lies in the fact that:
 - It provides initiation and approaches for development, conservation and protection of natural resources to stop environmental degradation.
 - It makes us aware of sensible consumption of our natural resources by reducing, recycling and reusing our available resources.
 - It gives solutions in terms of clean energy usage at all levels by efficient use of wind, solar, water energy, etc.
 - It ensures environmentally sustainable economic growth.
 - It provides methods and alternatives to reduce the impact of air, water and soil pollution on our environment.
 - It supports equality of income, sex, age, disability, race, religion and opportunity for social and economic development of the society.



- It supports the concept of smart and sustainable cities with developed transport, clean water and sanitation, quality education and decent employment to all.
- It uses more environment friendly technologies based on efficient use of resources.
- All the nations across the globe are together in support of implementing these goals in an effective manner.



Reboot (Page 118)

1. Organic farming is encouraged by the government of India. Many private sectors are now coming forward to help farmers grow crops using cow dung and no chemical pesticides and fertilizers to increase their production. This is a true example of sustainable development.

The Government of India in collaboration with various NGOs and non-government organizations aims to save water by recycling and reusing it through rain water harvesting.

2. Sustainable Cities and Communities

For our societies and countries to prosper at present and in future we all need to have cleaner, greener and modern sustainable cities.

Responsible Consumers and Producers

Responsible consumers are conscious of their consumption habits and contribute to a more positive impact on society and the environment. from the producers of goods and services. Producers should go for production of goods with negative environmental impacts such as soil, water, greenhouse gas emissions and degradation of ecosystems.

3. By stopping the cutting of trees and forest, land degradation, fragmentation and overgrazing will help in preserving and restoring the terrestrial ecosystems such as forests, wetlands, grasslands, drylands and mountains. Cutting of trees is leading to soil erosion and making land dry and unusable for cultivation.

Exercise



Unsolved Questions

Section A (Objective Type Questions)

Quiz

- | | | | | | |
|-----------|----------------------------|-----------------|---------------|----------|------------|
| A. | 1. c | 2. d | 3. d | 4. c | 5. d |
| B. | 1. Sustainable development | 2. Solar energy | 3. NITI Aayog | 4. 6 | 5. Organic |
| C. | 1. True | 2. True | 3. False | 4. False | 5. False |
| D. | 1. c. | 2. e. | 3. d. | 4. b. | 5. a. |



Section B (Subjective Type Questions)

- A.** 1. The five Sustainable Development Goals are the following:
- Goal 1 No Poverty
 - Goal 2 Zero Hunger
 - Goal 3 Good Health and Wellbeing
 - Goal 4 Quality Education
 - Goal 5 Gender Equality
2. a. With the existing issues of climate change, the number of species both on land and water has become extinct and many are on verge of their extinction. Under such circumstances striking a balance in the food chain to bring back the balance in different forms of the ecosystem is a big responsibility.
- b. Many countries and companies are still giving priority to their own profits at the cost of overuse and exploitation of the natural resources.
3. Three importance of sustainable development are:
- It provides initiation and approaches for development, conservation and protection of natural resources to stop environmental.
 - It gives solutions in terms of clean energy usage at all levels by efficient use of wind, solar, water energy etc.
 - All the nations across the globe are together in support of implementing these goals in an effective manner.
4. The aim of the member countries of the United Nations in implementing sustainable goals are to end poverty, protect the planet and improve the lives and prospects of everyone, everywhere.
5. • It provides initiation and approaches for development, conservation and protection of natural resources to stop environmental degradation.
- It makes us aware of sensible consumption of our natural resources by reducing, recycling and reusing our available resources.
 - It gives solutions in terms of clean energy usage at all levels by efficient use of wind, solar, water energy, etc.
6. Sustainable development is the development that satisfies the needs of the present without compromising the capacity of future generations, guaranteeing the balance between economic growth, care for the environment and social well-being.
- B.** 1. Initiatives of India in sustainable development are:
- NITI (National Institution for Transforming India) Aayog was given the task of coordinating SDGs in India.

- The Ministry of Statistics & Programme Implementation has built key indicators to monitor the implementation of SDGs.
 - States are also advised to work on similar grounds in planning, implementing, developing and monitoring the state-sponsored schemes in support of SDGs.
 - The Namami Gange Mission— a policy towards achieving the SDG 6, was launched to include sewerage project management, urban and rural sanitation, tackling industrial pollution, water use efficiency and quality improvement, ecosystem conservation and Clean Ganga Fund.
2. These are the three major problems related to sustainable development:
 - **Food:** As we are using up more and more land for designing concrete jungles, we are reducing the land for cultivation of crops. Soil nutrients are also getting depleted due to pollution from industries, overgrazing of land etc. Overpopulation is another threat for the shortage of food all across the world.
 - **Water:** The supply of drinking fresh water from rivers and ponds are limited all over the world. Due to pollution these water bodies are contaminated and leaving with very less quantity of water for actual use.
 - **Fuel:** Forests are cut down for fuel leaving barren land where soil erosion will lead to soil degradation and drastic change in climatic conditions. Increase in the consumption of oil and natural gas has led to the increase in the level of carbon dioxide causing change in the climatic conditions. We are using a lot of wood from trees for construction of homes and furniture. Extreme weather conditions, such as floods, extreme cold or heat, are seen in many places, which affect the people living there.
 3.
 - **Goal 14 Life below Water:** This goal focuses on protecting life under water by eliminating the pollution, overfishing, and illegal fishing practices to achieve healthy and productive oceans.
 - **Goal 15 Life on Land:** This goal ensures stopping further damage to life on earth by deforestation, loss of natural habitats and land degradation so that all nations together can work to conserve and sustainably use biodiversity and ecosystems.
 4. Environmental impacts such as soil pollution, water pollution, greenhouse gas emissions and degradation of ecosystems are caused due to unrestrained development. We have exploited it so much to satisfy our needs, contaminated it with all types of pollution that it has led to land degradation, disturbed ecosystems and drastic climatic change.
 5. Three sustainable development goals relevant to my country are:
 - **Goal 4: Quality Education:** This goal ensures good quality education for all so that the youth and adults of all nations have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship.

- **Goal 5: Gender Equality:** This goal ensures that people of all genders have equal rights and opportunities so that they have the power to shape their own lives and contribute to the development of society.
- **Goal 6: Clear Water and Sanitation:** This goal ensures availability of clean and safe water for drinking with proper water resources management at all levels, protecting and restoring water related ecosystems, and providing adequate and equal sanitation and hygiene for all.

C. Competency-based/Application-based questions:

1. Do Yourself
2. Do Yourself
3. Do Yourself



Lab Activity

(Page 123)

Do Yourself



Class Activity

(Page 124)

Do Yourself

