Computer-1

1. Computer and Its Uses

Skill Sharpeners

A. Click the correct option:
1. (a) Offices
2. (b) Booking tickets
3. (c) Desktop computer
4. (b) Schools

B. Fill the appropriate terms:
1. Computer   2. tired
3. homework   4. palm

C. True/False:
1. True, 2. False, 3. True, 4. False

D. Match the different places with their pictures:
1. (c), 2. (d), 3. (a), 4. (b)

E. Application based questions.
Rahul should use a computer, tablet or smartphone. These electronic devices allow him to run a drawing application and listen to song simultaneously.

F. Art Integration (For Fun)
Do yourself.

2. Part of Computer

Skill Sharpeners

A. Click the correct option:
1. (b) printer
2. (b) VDU
3. (c) monitor
4. (a) save

B. Fill the appropriate terms:
1. screen   2. mouse
3. speaker   4. printer

C. True/False:
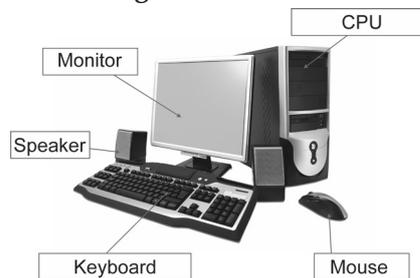1. False, 2. False, 3. True, 4. True

D. Match the following:
1. (b), 2. (d), 3. (a), 4. (c)

E. Application based question.
Do yourself.

F. Art-Integration (For Fun)

3. The Mouse

Skill Sharpeners

A. Click the correct option:
1. (b) arrow
2. (a) clicking
3. (b) pressing
4. (c) both of them

B. Fill the appropriate terms:
1. pointing   2. single click
3. arrow   4. scroll wheel

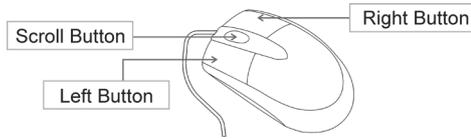**C. True/False:**
1. False, 2. True, 3. True, 4. True

D. Unscramble the words and identify the correct word.
1. BUTTON, 2. MOUSE, 3. CLICK, 4. SCROLL

E. Application based question.
Do yourself.

F. Art-Integration (For Fun)

4. The Keyboard

Skill Sharpeners

A. Click the correct option:

1. (b) keys
2. (b) Enter key
3. (c) Backspace key
4. (a) Alphabet key
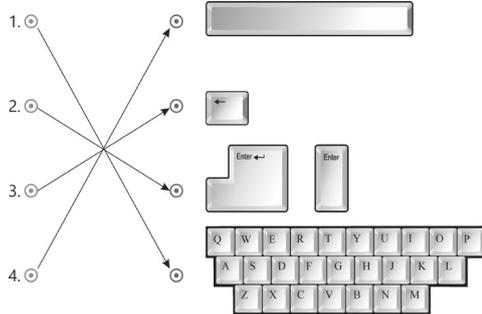
B. Fill the appropriate terms:

1. top most   2. number
3. 26   4. keys

C. True/False:

1. True, 2. False, 3. True, 4. True

D. Match the following:

E. Application based questions.
Do yourself.

F. Art-Integration (For Fun)
Do yourself.

5. Paint

Skill Sharpeners

A. Click the correct option:

1. (b) start
2. (a) eraser
3. (c) shape
4. (a) drawing

B. Fill the appropriate terms:

1. File tab   2. shape
3. Ribbon   4. line

C. True/False:

1. True, 2. True, 3. False, 4. False

D. Match the column:

1. (ii), 2. (iii), 3. (iv), 4. (i)

E. Application based question.

1. Click on arrow below the brushes.
2. Different brushes will appear, select anyone brush.
3. Select size thickness and color as per your choice.
4. Drag the mouse to draw any picture in drawing area.

F. Art-Integration (For Fun)
Do yourself.

6. Introduction to Tux Point

Skill Sharpeners

A. Click the correct option:

1. (c) canvas
2. (b) paint tool
3. (a) quit button
4. (b) magic tool

B. Fill the appropriate terms:

1. save   2. stamp
3. colors palatte 4. right

C. True/False:

1. False, 2. False, 3. True, 4. False

D. Match the column:

1. (iv), 2. (i), 3. (ii), 4. (iii)

E. Application base question.

• Paint tool • Stamp tool • Lines tool • Shape tool • Text tool • magic tool • Eraser tool • New tool

F. Art-Integration (For Fun)

Do yourself.

7. Drawing with AI

Skill Sharpeners

A. Click the correct option:

1. (b) man-made
2. (c) intelligent
3. (b) image
4. (c) artificial

B. Fill the appropriate terms:

1. Machine   2. Intelligence
3. Artificial   4. internet

C. True/False:

1. True, 2. True, 3. False, 4. False

D. Application based question.

- AI helps computers do things like to understand language, recognize objects in pictures, play games, and much more.
- Through AI, a computer can play, talk, and perform various other tasks.
- AI helps you in doing things faster and accurately.

E. Art-Integration (For Fun)

Do yourself.

8. Basic Computer Etiquettes

Skill Sharpeners

A. Click the correct option:

1. (a) in a queue
2. (a) avoid dust
3. (a) should not be touched
4. (a) save electricity
5. (a) to maintain cleanliness

B. Fill the appropriate terms:

1. silence   2. quiet
3. electric   4. edible

C. True/False:

1. True, 2. False, 3. True, 4. False

D. Match the columns:

1. (c), 2. (d), 3. (b), 4. (a)

E. Application based question:

- Remove your shoes before entering a computer room to maintain cleanliness.
- Maintain a queue to enter the computer room to avoid crowding and conflicts.
- Always keep silence inside the room to concentrate on your work.
- Computer should be covered to keep them clean and dust free.
- Always switch off the computer when not in use to avoid unnecessary consumption of electricity.

F. Art-Integration (For Fun)

Do's in Computer Room	Don't in Computer Room
• Always maintain silence	• Never use water to clean computer and its part
• Always remove your shoes before entering	• Never bring eatables to the lab.
• Always switch off the lights, fan and computer before leaving	• Never touch electrical wires attached to computer to avoid any mishaps.

Worksheet-1

A. Click the correct option:

1. (c) Desktop computer
2. (b) VDU
3. (c) Pressing
4. (a) Alphabet keys

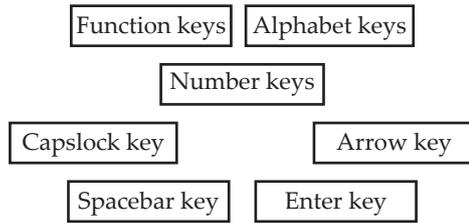**B. Fill the appropriate terms:**

1. 26
2. pointing

3. mouse

4. tired

C. Write the full form of :

1. Central Processing Unit

2. Visual Display Unit

3. Uninterruptible Power Supply

4. Electronic Mail

D. Label the key board :

| Function keys | Alphabet keys |

| Number keys |

| Capslock key | | Arrow key |

| Spacebar key | Enter key |

3. (b) man-made

4. (a) should not be touched
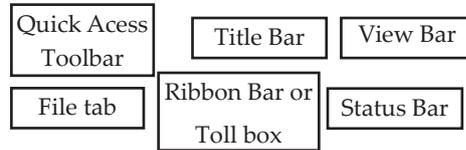
B. Fill the appropriate terms:

1. machine

2. ruler

3. left

4. eatable

C. Match the column :

1. (c), 2. (d), 3. (a), 4. (b).

D. Label the components of paint :

| Quick Acess Toolbar | | Title Bar | View Bar |

| File tab | Ribbon Bar or Toll box | Status Bar |

Worksheet-2

A. Click the correct option:

1. (c) Shape

2. (a) quit button

❏❏

Computer-2

1. Exploring Desktop

Skill Sharpeners

A. Click the correct option:

1. (a) Taskbar
2. (c) typing
3. (b) taskbar
4. (a) resize

B. Fill in the blanks:

1. personalize   2. file explorer
3. Microsoft   4. settings app
5. Snap

C. True/False:

1. True, 2. False, 3. True, 4. True, 5. True

D. Match the following:

1. (iii), 2. (iv), 3. (ii), 4. (i)

E. Answer the following questions.

1. • Click on the Start button at the bottom-left corner of the screen.
    • Scroll through the list or type the program's name in the search bar.
    • Click on the desired application to open it.
2. • Click on the search box near the Start button or taskbar.
    • Start typing the name of the file or app you want.
    • Select it from the search results to open it.
3. Snap is a feature in Windows 10 that helps you resize and arrange windows quickly. To use Snap:
    • Click and drag a window to the elft or right edge of the screen.
    • Release it when the cursor touches the edge.
    • The window will snap to that side.
    • You can then choose another window to fill the other help of the screen.

F. Art-Integration Question

Do yourself.

2. Working of a Computer

Skill Sharpeners

A. Click the correct option:

1. (a) electronic
2. (c) device
3. (b) Mouse
4. (c) Both (a) & (b)
5. (c) CPU

B. Fill in the blanks:

1. a keyboard   2. printers
3. CPU   4. scanner
5. small

C. True/False:

1. False, 2. False, 3. False, 4. False, 5. True

D. Match the pictures with their names:

1. (e), 2. (c), 3. (a), 4. (b), 5. (d).

E. Answer the following questions.

1. A device is a machine or tool that helps us to do work. A computer is also a device.
2. Storage devices are parts of a computer that save information or data.

    Example: Pen drive, CD, hard disk, optical disk etc.

3. Input devices are the parts of a computer that help us to give instruction to the computer.

Example: Keyboard, Mouse, Scanner, Microphone etc.

F. Art-Integration Question

Do yourself.

3. The Digital Backbone of Everyday Life

Skill Sharpeners

A. Click the correct option:

1. (a) Banks
2. (a) drawing
3. (c) ATMs
4. (c) medical
5. (a) emails

B. Fill in the blanks:

1. buildings, houses and towers
2. banks
3. computer
4. satellites, rockets and missiles

C. True/False:

1. True, 2. False, 3. True, 4. True

D. Match the pictures with their names:

1. (e), 2. (a), 3. (d), 4. (c), 5. (b).

E. Answer the following questions.

1. Two uses of computer in offices are as follows:
   - It helps with representations on some projects.
   - It helps in sending and receiving emails.
2. The uses of computer in school are as follows:
   - It helps in computer labs for conducting computer classes.

   - It is used to create reports, time-table, activity calenders, circulars, etc.
   - In the school library, to keep the records of books.
   - It keeps the records of students.
3. - It helps a doctor during operation.
   - It helps in the checkups, like eye testing.
   - It is used for monitoring a patient.
   - It helps in diagnosing many diseases.
   - To keep medical records of patients.

F. Art-Integration Question

- Computers help you search for information quickly.
- You can watch videos and lessons on the computer to learn new things.
- You can create school projects, drawings and presentations on the computer.
- Computers help you store notes and homework in one place.

4. Working with Windows

Skill Sharpeners

A. Click the correct option:

1. (b) UPS
2. (a) icons
3. (b) electricity
4. (b) power
5. (b) Left Hand Side

B. Fill the blanks:

1. UPS   2. search
3. wallpaper   4. electricity

C. True/False:

1. True, 2. False, 3. True, 4. True

D. Match the pictures with their names:

1. (d), 2. (c), 3. (a), 4. (b)

E. Answer the following questions.

1. UPS (Uninterruptible Power Supply) prevents the computer from sudden shutdowns if the power goes off.

2. The Windows Desktop is the first screen that appears when a computer is turned on. It contains icons, wallpaper and a taskbar, which help users navigate the system.

3. UPS stands for Uninterruptible Power Supply.

4. Wallpaper is the background image displayed on the desktop screen. Users can set any image as their wallpaper.

F. Art-Integration Question

Do yourself.

5. Notepad

Skill Sharpeners

A. Click the correct option:

1. (b) Text editor
2. (b) File
3. (b) Insert
4. (b) Font
5. (c) .txt

B. Fill in the blanks:

1. Cursor
2. editing
3. .txt
4. keyboard

C. True/False:

1. True, 2. False, 3. False, 4. False

D. Match the pictures with their names:

1. (b), 2. (d), 3. (a), 4. (c)

E. Answer the following questions.

1. Notepad is a text-editing software used for creating and editing plain text flies with a .txt extension.

2. The text starts to appear from the position of the cursor in the Notepad window.

3. No, you cannot draw pictures in Notepad because it is a plain text editor and does not support images or graphics.

F. Art-Integration Question

Example of 10-line eassay:

My School

• My school is a place where I learn new things every day.

• The teachers in my school are very kind and helpful.

• I have many friends in my school.

• We study different subjects like English, Math, and Science.

• Our school has a big playground where we play games.

• The school also has a library with many books.

• We celebrate different festivals and events in school.

• Our school teaches us discipline and good manners.

• The classrooms are clean and have a good learning environment.

• I love my school very much!

6. Wordpad

Skill Sharpeners

A. Click the correct option:

1. (c) typing
2. (c) title bar

3. (c) quick access

4. (b) double

5. (a) bold

B. Complete the spelling:

1. F<u>o</u>nt

2. Ri<u>bb</u>on

3. Cur<u>s</u>or

4. Un<u>derline</u>

C. True/False:

1. True, 2. True, 3. False, 4. True

D. Match the pictures with their names:

1. (d), 2. (a), 3. (b), 4. (c)

E. Answer the following questions.

1. WordPad is a text-editing program that allows users to type, format, and edit text. It provides basic text formatting features like bold, italic, underline, font size, and font color.

2. • To select a single word → Double-click the word.

    • To select a single paragraph → Triple-click a word within the paragraph or double-click in the margin to the left of the paragraph.

    • To select any part of the document → Click at the beginning, press and hold Shift, then click at the end.

    • To select the entire document →Triple-click in the left margin, press Ctrl + A, or use the "Select All" button on the Home tab.

3. • **Method 1:** Click the Close (X) button on the top right of the WordPad window.

    • **Method 2:** Click on the Exit option in the File menu.

F. Art-Integration Question

Do yourself.

7. Tux Typing

Skill Sharpeners

A. Click the correct option:

1. (b) Penguin

2. (c) Learn to type

3. (b) Random words

4. (a) Space bar

B. Fill in the blanks:

1. typing   2. falling latters

3. keyboard   4. sky

5. computer

C. Match the column:

1. (b), 2. (a), 3. (d), 4. (c)

D. Answer the following questions.

1. The name of the penguin in Tux Typing is Tux.

2. When you type words correctly, you catch falling letters or words.

3. Playing Tux Typing helps you improve your typing speed, accuracy, and familiarity with the keyboard while making learning fun.

4. Letters or words fall from the sky,and you must type them correctly.

E. Art-Integration Question

Do yourself.

Worksheet-1

A. Click the correct option:

1. (a) Taskbar

2. (a) electronic

3. (a) Banks

4. (b) UPS

B. Fill the appropriate terms:

1. personalize

2. keyboard

3. graphics

4. UPS

C. True/False :

1. T, 2. F, 3. T, 4. T

D. Match the following:

1. (c), 2. (d), 3 (b), 4. (a).

E. Answer the following question :

1. • Click on the start button at the bottom left corner of the screen.

   • Scroll through the list or type the program's name in the search bar.

   • Click on the desired application to open it.

2. Storage devices are the parts of a computer that save information or data.

   Example : Pen drive, CD, hard disk, optical disk, etc.

3. • It help a doctor during operation.

   • It helps in the checkups, like eye testing.

   • It is used for monitoring a patient.

   • It helps in diagnosing many diseases.

   • To keep medical records of patients.

4. UPS (Uninterruptible Power Supply) prevents the computer from sudden shutdowns if the power goes off.

Worksheet-2

A. Click the correct option:

1. (a) Text editor

2. (c) typing

3. (b) Penguin

4. (c) Learn to type

B. Fill in the blanks:

1. cursor

2. editing

3. typing

4. falling letters

C. True / False :

1. T, 2. T, 3. T, 4. F.

D. Match the following :

1. (b), 2. (d), 3. (a), 4. (c).

E. Answer the following question :

1. Notepad is a text editing software used for creating and editing plain text files with a .txt extension.

2. WordPad is a text-editing program that allows users to type, format and edit text. It provides basic text formatting features like bold, italic, underline, font size and font color.

3. The name of the penguin in Tux Typing is Tux.

❏❏

Computer-3

1. Working of Computer

Skill Sharpeners

A. Click (✓) the correct option:
1. (b) Input
2. (b) hard disk
3. (b) CPU
4. (b) Drawing
5. (a) output

B. Fill in the blanks:
1. devices
2. hardware
3. ALU
4. WordPad

C. Match the following words with their associated field in computer:
1. (b), 2. (d), 3. (a), 4. (e), 5. (c)

D. Tick (✓) the correct statements and cross (✗) out the wrong ones.
1. (✓), 2. (✓), 3. (✓), 4. (✗).

E. Answer the following questions.
1. Input is the data or instruction given to a computer.
2. Output is the result generated by a computer after processing the input.
3. The CPU is the primary component of a computer that executes instruction from software and performs arithmetic, logic, control and input/output operations as specified by these instructions.
4. Input devices provide the data and instructions to the computer. Output devices display or produce the results of the processing done by the computer.
5. Computer hardware refers to the physical components of a computer system, such as the CPU, motherboard, RAM and input/output devices.

F. Art Integration
Do yourself.

2. Introduction of Windows 10

Skill Sharpeners

A. Click (✓) the correct option:
1. (b) Bottom
2. (c) Both
3. (a) Cortana
4. (c) Both

B. Fill in the blanks:
1. operating system
2. graphics
3. wallpaper
4. ribbons

C. Match the following words with associated with the field of computer:
1. (d), 2. (c), 3. (a), 4. (b).

D. Answer the following questions.
1. A software that manages entire system is known as operating system.

    The names of some operating system are windows, chrome OS, Mac OS, Linux and Android.
2. Cortana voice search is a feature in windows that lets you search for things on your computer or the internet by speaking.
3. System tray is located on the right-hand side of the task bar. It shows icons for programs that are running quietly in the background, such as Antivirus.
4. Working area is a large are located in the centre of the

window. Our work, such as drawing or text are shown in the working area.

E. Art Integration

Do yourself.

3. Working with Files and Folders

Skill Sharpeners

A. Click (✓) the correct option:

1. (b) Yellow

2. (a) Video

3. (c) MS paint

4. (a) File

B. Fill in the blanks:

1. audio 2. image

3. desktop 4. files

C. Match the following words with associated with the field of computer:

1. (d), 2. (b), 3. (a), 4. (c).

D. Tick (✓) the correct statements and cross (✗) out the wrong ones.

1. (✓), 2. (✓), 3. (✗), 4. (✗).

E. Answer the following questions.

1. Content is right hand side part. This large area displays the contents of the folder or drive selected on the left side.

2. Folders are used to store and organize files on a computer.

3. To save files in a desired folder:

    Step 1 : File → Save

    Step 2 : In the Save As dialog box, click on D : drive.

    Step 3 : Double click on the picture folder.

    Step 4 : Type the name of the file. Click on the Save button.

4. Yes, different files need different programs to open.

    For example :

    • A picture file (.jpg) opens in MS Paint.

    • A document file (.docx) opens in MS Word.

    • A song file (.mp3) opens in a music player.

F. Art Integration

Do yourself.

4. Computer Softwares

Skill Sharpeners

A. Click (✓) the correct option:

1. (b) Software

2. (c) Both

3. (b) MS PowerPoint

4. (b) MS DOS

B. Fill in the blanks:

1. Mac OS

2. system

3. single user

4. multi-user

C. Tick (✓) the correct statements and cross (✗) out the wrong ones.

1. (✓), 2. (✗), 3. (✗), 4. (✓).

D. Answer the following questions.

1. (1) CorelDRAW Graphics Suite

    (2) Adobe CS

2. A multi-user operating system allows more than one person to use the computer at the same time.

3. **GUI :** Graphical User Interface

    CUT : Character User Interface

4. (1) MS DOS (2) Windows 10

F. Art Integration

Do yourself.

5. Getting Started with Microsoft Word 2021

Skill Sharpeners

A. Click (✓) the correct option:

1. (a) Track changes

2. (a) Home

3. (b) Ctrl + Enter

B. **Fill in the blanks:**

1. word processing

2. Calculator

3. clipboard

4. mail merge

C. **Tick (✓) the correct statements and cross (✗) out the wrong ones.**

1. (✗), 2. (✓), 3. (✗), 4. (✗), 5. (✗).

D. **Answer the following questions.**

1. In MS word 2021, we can work with paragraphs by using the Home tab.

   We can :

   • Align text (Left, Cente, Right, Justify)

   • Change line spacing

   • Add bullets or numbers

   • Increase or decrease indent

2. Click on the Insert tab. You can insert :

   • pictures • Shapes • Tables • WordArt • Charts • Text Boxes

3. To save a document :

   Step 1 : Click on the File tab.

   Step 2 : Select Save or Save As.

   Step 3 : Choose the location and enter a file name.

4. To create a new document :

   Step 1 : Click on the File tab in the Ribbon.

   Step 2 : Select New from the menu.

   Step 3 : Choose a blank document or select a template from the available options.

5. **Bold :** Ctrl + B

   Italic : Ctrl + I

   Underline : Ctrl + U

E. **Art Integration**

Do yourself.

6. Computer Language

Skill Sharpeners

A. **Click (✓) the correct option:**

1. (b) Language

2. (c) Translator

3. (c) Machine Language

4. (b) Google

B. **Fill in the blanks:**

1. PHP

2. Assembly

3. High

4. loader

C. **Tick (✓) the correct statements and cross (✗) out the wrong ones.**

1. (✗), 2. (✓), 3. (✗), 4. (✓).

D. **Answer the following questions.**

1. Low-Level Language, also known as machine language or machine code, is the lowest level programming language understood by computers.

2. A compiler translates the entire source code of a program written in a high-level language (like C, C++, Java) into machine code (binary code) that the computer's CPU can directly execute.

3. The two advantages of high-level language are :

   (1) **Abstraction :** High-level languages provide abstraction that allow programmers to focus more on the logic of the program rather than the specific details of the hardware. This abstraction simplifies programming tasks and reduces the complexity of writing code.

   (2) Productivity : High-level languages are designed

to be more expressive and require fewer lines of code to accomplish tasks compared to low-level languages. This improves programmer productivity and reduces development time.

4. Translator in the context of computers refer to software tools that converts programs written in one programming language or representation into another form that can be executed by the computer.

E. Art Integration

Do yourself.

7. Fun with Scratch

Skill Sharpeners

A. Click (✓) the correct option:
1. (c) Program   2. (c) Both
3. (c) Stage   4. (c) Blocks
5. (b) 360 degrees

B. Fill in the blanks:
1. Scratch   2. Motion
3. Script   4. Block

C. Match the following columns.
1. (b), 2. (c), 3. (a), 4. (d).

D. Tick (✓) the correct statements and cross (✗) out the wrong ones.
1. (✓), 2. (✓), 3. (✗), 4. (✓), 5. (✓).

E. Answer the following questions.
1. Instructions or sets of instructions given to computers to perform task is called programming. Programming is a stepwise process.
2. Stage is the area where we see the animation or action of the Sprite.
3. We can add add a Backdrop by clicking the choose Backdrop button and selecting or drawing a new one.

4. We learn how to create animations, stories, and games using blocks of code.
5. Turn clockwise (clockwise means the direction in which hands of a clock move).
   • Turn anticlockwise (it means the opposite direction to the hands of a clock).
   • Point the Sprite up, down, left or right.

F. Art Integration

Do yourself.

Worksheet-1

A. Click the correct option:
1. (b) hard disk
2. (b) Bottom
3. (a) Video
4. (b) MS DOS

B. Fill the appropriate terms:
1. devices
2. graphics
3. desktop
4. multi-user
5. clipboard

C. True / False :
1. T, 2. F, 3. T, 4. F. 5. F.

D. Match the following words with their associated field in computer :
1. (b), 2. (d), 3. (a), 4. (e), 5. (c)

E. Answer the following questions.
1. The full form of I-P-O is Input-Processing-Output.
2. Cortana voice search is a feature in windows that lets you search for things on your computer or the internet by speaking.
3. To save files in a desired folder:
   Step 1: File → Save
   Step 2 : In the Save As dialog box, click on D: Drive.
   Step 3: Double click on the

picture folder.

Step 4: Type the name of the file. Click on the save button.

4. 1. MS DOS 2. Windows 10

5. **Bold :** Ctrl + B; **Italic :** Ctrl + I; **Underline** : Ctrl + U.

6. The two advantages of high-level language are :

(1) **Abstraction :** High-level languages provide abstraction that allow programmers to focus more on the logic of the program rather than the specific details of the hardware. This abstraction simplifies programming tasks and reduces the complexity of writing code.

(2) Productivity : High-level languages are designed to be more expressive and require fewer lines of code to accomplish tasks compared to low-level languages. This improves programmer productivity and reduces development time.

7. • Turn clockwise (Clockwise means the direction in which hands of a clock move)

• Turn anticlockwise (it means the opposite direction to the hands of a clock)

• Point the sprite up, down, let or right)

Worksheet-2

A. Click the correct option:

1. (a) Track changes

2. (b) Language

3. (c) Program

4. (a) Home

B. Fill the appropriate terms:

1. word processing

2. PHP

3. Assembly

4. Scratch

5. Calculators

C. True / False :

1. F, 2. F, 3. T, 4. T, 5. F.

D. Match thefollowing columns :

1. (b), 2. (c), 3. (a), 4. (d).

E. Answer the following questions.

1. In MS Word 2021, we can work with paragraphs by using the Home tab : we can :

• Align text (Centre, Left, Right, Justify)

• Change line spacing, add bullets or numbers

• Increase or decrease indent

2. Low level language, also known as machine language or machine code, is the lowest-level programming language understood by computers.

3. Instructions or set of Instructions given to computers to perform task is called programming. Programming is a stepwise progress.

4. Translator in the context of computers refer to software tools that converts programs written in one programming language or representation into another form that can be executed by the computer.

5. We can add a backdrop by clicking the choose backdrop button and selecting or drawing a new one.

❏❏

Computer-4

Skill Sharpeners

A. Click (✓) the correct option:

1. (c) Groove Music

2. (b) Spreadsheet

3. (b) Play audio and video files

4. (c) Adobe Photoshop

B. Fill in the blanks:

1. Auto Play   2. video

3. manage, manipulate

4. Update   5. Auto Play

C. True or False:

1. True   2. True

3. False   4. False

D. Match the columns:

1. (b), 2. (a), 3. (d), 4. (c)

E. Very Short Answer Type Questions:

1. Entertainment and Education

2. Auto Play

3. Groove Music

4. To play audio and video files

F. Short Answer Type Questions:

1. The process of installing a multimedia CD-ROM on windows 10 are as follows:

   Step 1 : Insert the CD-ROM

   (i) Open the CD/DVD drive on your computer by pressing the drive's eject button.

   (ii) Place the multimedia CD-ROM into the drive and close it.

   Step 2 : Install the software

   (i) Windows 10 should automatically recognize the CD-ROM and displays a notification. If it doesn't, go to file explorer and open the CD/DVD drive.

   (ii) Locate and double click the setup.exe or install.exe file on the CD-ROM. This will start the installation process.

   (iii) Follow the on-screen instructions provided by the installation wizard. This usually involves agreeing to the license terms, selecting installation options, and choosing a directory for installation.

   (iv) Once installation is complete, you might need to restart your computer.

2. Multimedia helps in creating interactive learning environments. Educational software and videos make complex subjects easier to understand.

3. Groove music is a built-in music player in windows 10. Open Groove Music from the start Menu and drag and drop the music file into the player.

4. In education, Multimedia helps in creating interactive learning environments. Educational Software and videos make complex subjects easier to understand.

   In entertainment, Multimedia content like movies, music and games provides relaxation and enjoyment.

Art Integration

1. By combining images, animations, and audio using software like Photoshop and video editors to produce a creative visual presentation.

2. Multimedia can add videos, images, animations, and sound effects to make historical events more vivid, engaging and memorable.

2. Windows 10 Settings

Skill Sharpeners

A. Click (✓) the correct option:

1. (c) Personalization
2. (c) Colors in Personalization
3. (c) video
4. (b) Lock Screen
5. (b) Time & Language

B. Fill in the blanks:

1. Settings   2. Background
3. Slide show   4. Change
5. Fonts

C. True or False:

1. False   2. True
3. False   4. True
5. False

D. Match the columns:

1. (b), 2. (c), 3. (a), 4. (d)

E. Very Short Answer Type Questions:

1. You can find the option to change the screen saver in settings > personalization > Lock Scren > Screen Saver settings.

2. The section in the settings app that allows you to change the window color is settings > personalization > colors.

3. • Click the start button on the task bar.
    • Scroll down and select the settings app.

4. Picture, solid color and slide show.

5. By toggling the switch set time automatically in the date & Time settings.

F. Short Answer Type Questions:

1. To change the desktop background in windows 10 :
    • Click on the start menu and select settings.
    • Click on Personalization in the settings window.
    • In the left-hand menu, select background.
    • From the drop down menu, select Picture, solid color or slide show.
    • Browse and select your desired image or color and apply the settings.

2. To costomize the window color in windows 10 :
    • Click on the start menu and select settings.
    • Click on personalization.
    • In the left hand menu, select colors.
    • Select a color from the palette or choose custom color for more options.
    • Toggle the switch for Title bars and window borders to apply the color to these elements.

3. To set the date and time manually in windows 10 :
    • Click on the start menu and select settings.

- Click on Personalization.
- In the left-hand menu, select Date and Time.
- Click change to manually set the date and time.

4. To apply a screen saver in windows 10 :
   - Click on the start menu and select settings.
   - Click on Personalization.
   - In the left hand menu, select lock screen.
   - Scroll down and click on screen saver settings.
   - Select a screen saver from the drop down menu and configure its settings.
   - Click apply and then OK to save your changes.

5. To change the display theme in windows 10:
   - Click on the start menu and select settings.
   - Click on Personalization.
   - In the left-hand menu, select themes.
   - Select a theme from the available options or click Get More Themes in Microsoft store for addition choices.

Art Integration

Do yourself.

3. Windows 10 : Working with Files and Folders

Skill Sharpeners

A. Click (✓) the correct option:

1. (c) Click on the File Explorer icon on the task bar.
2. (b) Ctrl + C

3. (c) Recycle Bin
4. (a) Right-Click and select New > Folder
5. (a) Cut and Paste

B. Fill in the blanks:

1. double-click   2. This PC
3. Recycle Bin   4. Ctrl
5. Recycle Bin

C. True or False:

1. True   2. True
3. False   4. False
5. True

D. Match the columns:

1. (b), 2. (d), 3. (a), 4. (e), 5. (c).

E. Very Short Answer Type Questions:

1. To temporarily store deleted files until they are permanently removed or restored.

2.
   - Click on the File Explorer icon on the taskbar or press Windows + E.
   - Select Thic PC. In the left-hand pane, click on This PC.

3. Ctrl + X.

4. The copied file is pasted in the selected location.

5.
   - Use File Explorer to navigate to the location where you want to create a new folder.
   - Right-click and select New > Folder from the context menu.
   - Enter a name for the new folder and press Enter.

F. Short Answer Type Questions:

1. To delete a file in windows 10 :
   - Click on the file you work to delete.

- Press the delete key on your keyboard or right-click and select delete from the context menu.
- Confirm the deletion if prompted.

To restore deleted file from the Recycle Bin :

- Double-Click on Recycle Bin icon on the Desktop.
- Click on the files you want to delete.
- Right-click and select Restore or click Restore the selected items in the toolbar. The items will be restored to their original location.

2. To move a file from one folder to another :

- Click on the file you want to move.
- Press Ctrl + X or right click and select cut.
- Navigate to the location where you want to move the file.
- Press Ctrl + V or right-click and select Paste.

3. To create a new text document in a specific folder :

- Use File Explorer to navigate to the location where you want to create a desired folder.
- Right-click on an empty area in the folder.
- Select New → Text Document.
- Enter a name for the new folder and press Enter.

4. To select multiple files at once in File Explorer :

Hold down the Ctrl key and click on each file you want to select. Alternatively, click and drag to draw a selection box around multiple files.

Art Integration

Do yourself.

4. Edit and Format Word Documents

Skill Sharpeners

A. Click (✓) the correct option:

1. (c) Ctrl + C
2. (b) Press Ctrl + H
3. (c) Review tab
4. (b) X_2
5. (c) Reverse the last action

B. Fill in the blanks:

1. Home
2. Thesaurus
3. Ctrl + V
4. Text Hightlight Color
5. Redo

C. True or False:

1. True   2. False
3. False   4. False
5. True

D. Match the columns:

1. (d), 2. (b), 3. (a), 4. (c), 5. (e).

E. Very Short Answer Type Questions:

1. Ctrl + Z
2. Home tab > Font dropdown
3. Select Text > Home > Superscript
4. Finds and replaces words or phrases
5. Review tab

F. Short Answer Type Questions:

1. Copying text means making a duplicate of it to use somewhere else.

   Steps:

   1. Select the Text: Click and drag your mouse over the text you want to copy.

   2. Copy the Text: Press Ctrl + C on your keyboard or right-click and choose Copy.

   3. Paste the Text: Place your cursor where you want to paste the copied text and press Ctrl + V or right-click and choose Paste.

2. The Thesaurus helps you find synonyms (words with similar meanings) and antonyms (words with oposite meanings).

   Steps:

   1. Select the Word: Highlight the word you want to find a synonym for.

   2. Open Thesaurus: Right-click the word and choose Synonyms or go to the Review tab and click Thesaurus.

   3. Choose a Synonym: Select a synonym from the list to replace the original word.

3. Changing the font size helps make your text more readable or eye-catching.

   Steps:

   1. Select the Text: Highlight the text you want to resize.

   2. Open Font Size Options: Go to the Home tab and use the Font Size drop-down menu.

   3. Choose a Size: Select a size from the list or type a specific number.

4. The Spelling and Grammar check feature helps you find and correct mistakes in your document.

5. Highlighting adds a background color to text, helping it stand out.

   Steps:

   1. Select the Text: Select the text you want to highlight.

   2. Open Highlight Options: Go to the Home tab and click the Text Highlight Color button.

   3. Choose a color: Pick a highlight color from the palette.

Art Integration

Create a colorful flyer in Microsoft Word to invite your friends to an imaginary "Art Festival".

- Use Bold, Italics, Font Color and Font Size for the title.
- Add shapes or images for decoration.
- Choose a background color.
- Experiment with text alignment and borders to make it vibrant.

5. Text Enhancement in MS Word 2021

Skill Sharpeners

A. Click (✓) the correct option:

1. (c) Align Left
2. (b) Click the "Bullets" button
3. (a) Home tab
4. (c) Home

5. (b) Design tab > Watermark

B. Fill in the blanks:

1. Numbering   2. Layout

3. Watermark   4. Home

5. Center

C. True or False:

1. False   2. False

3. True   4. True

5. True

D. Match the columns:

1. (d), 2. (e), 3. (a), 4. (b), 5. (c).

E. Very Short Answer Type Questions:

1. It aligns the text evenly on both the left and right margins.

2. In the Home tab.

3. To show a faint background text or image behind the document content.

4. In the Layout tab and the Home tab (for line spacing).

5. Go to the Home tab, click the Borders button, and choose a border option.

F. Short Answer Type Questions:

1. Go to the Design tab > Click on Watermark > Select "Custom Water-mark" > Choose Text or Picture > Apply.

2. "Align Left" positions text along the left margin; "Center" aligns text in the middle of the page.

3. To apply Page Borders and Shading in a document:

    Steps:

    1. Open Page Borders: Go to the Design tab and click the Page Borders button.

    2. Choose Border Style: In the Borders and Shading dialog box, select your desired style.

    Steps to Add Page Shading

    1. Open Page Color Options: Go to the Design tab and click the Page color button.

    2. Choose a Shading Color: Select a color from the palette to apply it to the entire page.

4. Text alignment refers to how text is positioned within the document. MS Word 2021 provides the following alignment options:

    •   Align Left

    •   Center

    •   Align Right

    •   Justify (aligns text evenly on both sides)

5. **Steps to add a Watermark:**

    1. Open Watermark Options: Go to the Design tab and click the Watermark button.

    2. Choose a Watermark: Select a predefined watermark or click 'Custom Watermark' to create your own.

Art Integration

Do yourself.

6. Working with Graphics in MS Word 2021

Skill Sharpeners

A. Click (✓) the correct option:

1. (b) Drag the corner handles

2. (b) Picture Format tab

3. (b) Insert tab

4. (a) Insert tab > 3D Models

5. (c) To apply visual effects like

shadows and glows to shapes

B. **Fill in the blanks:**

1. Picture Format
2. Insert
3. Shape Format
4. WordArt
5. Delete

C. **True or False:**

1. False
2. False
3. True
4. True
5. False

D. **Match the columns:**

1. (c), 2. (e), 3. (d), 4. (a), 5. (b).

E. **Very Short Answer Type Questions:**

1. Go to the Picture Format tab and click the Crop button.
2. It controls how text flows around the picture.
3. Go to Insert tab > Click Shapes > Choose and draw a shape.
4. Design tab > Watermark
5. Right-click the shape and select "Add Text" or simply type inside the shape.

F. **Short Answer Type Questions:**

1. Adjusting the size of a picture ensures it fits well with your document layout.
   1. Select the Picture: Click on the picture you want to resize.
   2. Resize Handles: Drag the corner handles to maintain the picture's aspect ratio, or drag the side handles to resize without maintaining the ratio.
   3. Use the Format Tab: For precise resizing, go to the "Picture Format" tab and enter exact dimensions in the "Size" group.
2. Inserting 3D Models
   1. Insert 3D Model: Go to the "Insert" tab and click "3D Models."
   2. Choose Model: Select "Stock 3D Models" or "From a File."
   3. Insert Model: Browse, select, and insert the 3D Model.
3. You can customize the appearance of your shapes with various formatting options.
   1. Select the Shape: Click on the shape you want to format.
   2. Format Shape: Go to the "Shape Format" tab and use options like "Shape Fill." "Shape Outline," and "Shape Effects" to customize the shape.
4. Remove unwanted WordArt from your document.
   1. Select WordArt: Click on the WordArt you want to delete.
   2. Delete WordArt: Press the "Delete" key or right-click and select "Cut."
5. Add effects like shadows, reflections, and glows to your shapes.

Art Integration

Do yourself.

7. Google Docs - An Introduction

Skill Sharpeners

A. Click (✓) the correct option:
1. (b) Writing and editing documents
2. (b) Google Drive
3. (b) Go to Insert > Image
4. (b) It saves automatically
5. (b) Share button

B. Fill in the blanks:
1. Google Drive 2. Share
3. Insert 4. Google
5. Tables

C. True or False:
1. True 2. False
3. True 4. False
5. True

D. Match the columns:
1. (c), 2. (a), 3. (d), 4. (b), 5. (e).

E. Very Short Answer Type Questions:
1. Google Docs is a free online word processor to write, edit, and share documents.
2. Google Docs files are saved in Google Drive.
3. It saves automatically every few seconds.
4. The Share button.
5. The Insert menu.

F. Short Answer Type Questions:
1. Two advantages of using Google Docs are:
   - It is **free** and works on **any device**.
   - It **automatically saves** your work every few seconds.
2. **To start a new document:**
   - Click on the + (Blank) button on the main screen.
3. **To change the font:**
   - Highlight the text.
   - Click on the **Font menu** (e.g., Arial) and choose a new font.
4. **Sharing a Document**
   - Sharing let others view or edit your document.

To share:
1. Click on the **Share** button in the top-right corner.
2. Enter your **teacher's or friend's email address**.
3. Click on **Send**.

Your friend will receive a **link** to view or edit the document.

Art Integration

Do yourself.

8. Introduction to the Internet

Skill Sharpeners

A. Click (✓) the correct option:
1. (c) Playing Board Games
2. (a) Internet Service Provider
3. (a) Uniform Resource Locator
4. (b) Browsing the Internet
5. (a) By typing its URL in the address bar.

B. Fill in the blanks:
1. computer or device
2. web browser
3. URL
4. search
5. HTTPS

C. True or False:
1. True 2. False
3. True 4. True
5. False

D. Match the columns:

1. (d), 2. (c), 3. (a), 4. (b), 5. (e).

E. Very Short Answer Type Questions:

1. A modem connects your device to the Internet via an ISP.

2. A search engine is a tool to find information on the internet using keywords.

3. By typing it in the browser's address bar.

4. Google

5. Hypertext Transfer Protocol.

F. Short Answer Type Questions:

1. To access a website:

1. Open Your Web Browser: Double-click the browser icon on your desktop or taskbar.

2. Enter the URL: Type the website's address into the address bar at the top of the browser.

3. Press Enter: Hit the "Enter" key on your keyboard to navigate to the website.

2. To connect to the Internet, you need a few essential components:

1. Computer or Device: This can be a desktop, laptop, tablet, or smartphone.

2. Modem: A modem connects your device to the Internet through an Internet Service Provider (IPS).

3. Router: If you want to connect multiple devices wirelessly, you need a router. Some modems have built-in routers.

4. ISP Subscription: An Internet Service Provider (ISP) supplies the connection to the Internet. This could be through various types of connections like DSL, cable, fiber-optic, or satellite.

5. Web Browser: Software like Google Chrome, Mozilla Firefox, or Microsoft Edge is used to access websites.

3. URL (Uniform Resource Locator) :

The web address of a specific page or resource on the Internet (e.g., www.example.com).

4. Open a search engine, type related keywords in the search box, and press Enter.

5. Uses of the Internet

The Internet is a powerful tool with numerous applications. Here are some common uses:

1. Communication: Email, instant messaging, and video calls help people stay connected across long distances.

2. Information retrieval: You can access a wealth of information on almost any topic, from news to scientific research.

3. Entertainment: Streaming services, online games, and social media provide a variety of entertainment options.

4. Education: Online courses, tutorials, and educational resources make learning accessible from anywhere.

5. Shopping: E-commerce websites allow you to buy and sell products and services online.

Art Integration

Do yourself.

9. Programming Concepts with Scratch

Skill Sharpeners

A. Click (✓) the correct option:

1. (d) all of these
2. (b) Constumes tab
3. (a) Costumes tab
4. (c) middle
5. (b) right

B. Fill in the blanks:

1. programming
2. visual
3. Costumes
4. sounds
5. backdrop

C. Tick (✓) the correct statements and cross (✗) the wrong ones:

1. ✓ 2. ✗ 3. ✓ 4. ✗ 5. ✓

D. Match the columns:

1. (d), 2. (e), 3. (b), 4. (c), 5. (a).

E. Very Short Answer Type Questions:

1. Programming is a set of instructions given to the computer for performing any task.
2. Costume panel shows various poses, stances, or expressions of the current sprite.
3. Sprite is a character used in a Scratch project, like a cat, ball, apple, etc.

4. Sound panel is used to add, record, and edit sounds in Scratch.

F. Short Answer Type Questions:

1. Launching Scratch

1. To launch Scratch application, click on Start.
2. Click on Scratch.

2. File menu includes options to create new Scratch project to load an existing project and to save the project on the computer.

3. Code Panel:

This appears when you click on Code tab on left hand side. It shows different blocks under various categories like Motion, Events, Looks, Variables, Control, etc. Each block is like an instruction to the computer to do a task. You can click on Add Extension button that exists at the bottom to add more categories of blocks like Pen and Music. Pen blocks help in drawing figures on the stage and Music blocks help in playing different instruments.

4. Event Handling

As event is any action that occurs at any point of time before, after or during animation. For example, user clicks on stage, or a key is pressed on the keyboard etc. In Scratch, we can decide what to do when an event occurs For example, if user clicks anywhere on the stage or on a sprite, it lets the sprite do something. The main approach towards event handling is to identify the exact event block

and a logical sequence of actions to be done. Let's do an exercise : Arrow keys to move a Beachball sprite.

Explanation : The movement direction for the Beachball is set by using point in direction block from Motion category for each of the 4 arrow keys as mentioned below:

- 0 – upward
- 180 – downward
- 90 – towards right side
- –90–towards left side (reverse of 90)

5.   Changing Sprite's Costume

Add an apple from Sprites library.

Click on Costumes tab to open Costume editor.

Set Fill Colour, Outline Colour and use the editing toolbar to make changes inthe look of Apple sprite.

Art Integration

Do yourself.

Worksheet-1

A.   Click the correct option:

1.   (b) Play audio and video files
2.   (c) Colors in Personalization
3.   (a) Cut and Paste
4.   (c) Ctrl + C

B.   Fill the appropriate terms:

1.   AutoPlay
2.   Slide show
3.   double-click
4.   Redo

C.   True / False :

1.   True   2. True
3.   False   4. True

D.   Match the following :

1. (b), 2. (a), 3. (d), 4. (c).

E.   Answer the following questions:

1.   Groove Music
2.   You can find the option to change the screen saver in settings > personalization > Lock Scren > Screen Saver settings.
3.   • Click the start button on the task bar.
      • Scroll down and select the settings app.
4.   Review tab

F.   Short Answer Type Questions:

1.   To select multiple files at once in File Explorer :

      Hold down the Ctrl key and click on each file you want to select. Alternatively, click and drag to draw a selection box around multiple files.

2.   To customize the window color in windows 10 :
      - Click on the start menu and select settings.
      - Click on personalization.
      - In the left hand menu, select colors.
      - Select a color from the palette or choose custom color for more options.
      - Toggle the switch for Title bars and window borders to apply the color to these elements.

3.   In education, Multimedia helps in creating interactive learning environments. Educational

Software and videos make complex subjects easier to understand.

In entertainment, Multimedia content like movies, music and games provides relaxation and enjoyment.

4. Changing the font size helps make your text more readable or eye-catching.

   Steps:

   1. Select the Text: Highlight the text you want to resize.

   2. Open Font Size Options: Go to the Home tab and use the Font Size drop-down menu.

   3. Choose a Size: Select a size from the list or type a specific number.

Worksheet-2

A. Click the correct option:

1. (c) Align Left
2. (b) Insert tab
3. (a) Internet Service Provider
4. (b) Costumes tab

B. Fill the appropriate terms:

1. Layout   2. WordArt
3. URL   4. Backdrop

C. True / False :

1. False   2. True
3. True   4. True

D. Match thefollowing columns :

   1. (c), 2. (e), 3. (d), 4. (a), 5. (b).

E. Answer the following questions:

1. In the Home tab
2. Go to the Picture Format tab and click the crop button

3. Google Docs is a free online word processor to write, edit, and share documents.

4. Hypertext Transfer Protocol.

F. Short Answer Type Questions:

1. **Uses of the Internet**

   The Internet is a powerful tool with numerous applications. Here are some common uses:

   1. Communication: Email, instant messaging, and video calls help people stay connected across long distances.

   2. Information retrieval: You can access a wealth of information on almost any topic, from news to scientific research.

   3. Entertainment: Streaming services, online games, and social media provide a variety of entertainment options.

   4. Education: Online courses, tutorials, and educational resources make learning accessible from anywhere.

   5. Shopping: E-commerce websites allow you to buy and sell products and services online.

2. File menu includes options to create new Scratch project to load an existing project and to save the project on the computer.

3. Two advantages of using Google Docs are:

   - It is **free** and works on **any device**.
   - It **automatically saves** your work every few seconds.

4. Adjusting the size of a picture ensures it fits well with your document layout.

   1. Select the Picture: Click on the picture you want to resize.

   2. Resize Handles: Drag the corner handles to maintain the picture's aspect ratio, or drag the side handles to resize without maintaining the ratio.

   3. Use the Format Tab: For precise resizing, go to the "Picture Format" tab and enter exact dimensions in the "Size" group.

❏❏

Computer-5

1. Computer– A Machine

Skill Sharpeners

A. Click (✓) the correct option:

1. (a) Abacus
2. (b) Analytical Engine
3. (a) Lady Ada Lovelace
4. (c) Integrated circuits
5. (c) Supercomputer

B. Fill in the blanks:

1. Abacus
2. Diffrence, Analytical
3. transistors
4. computer programmer
5. Neumann

C. True or False:

1. True   2. False
3. True   4. False
5. True

D. Answer the following questions:

1. **Main differences between first and second generations of computers:**
   - The first generation used vacuum tubes, were large and consumed a lot of power.
   - The second generation used transistors, making computers smaller, faster, and more reliable.

2. **First widely popular personal computer and its release year:**
   - The IBM PC was one of the first widely popular personal computers, released in 1981.

3. **How smartphones changed communication:**
   - Smartphones have enabled instant messaging, video calling, and social media acess, allowing people to stay connected in real-time rgardless of location.

Art Integration

Do yourself.

2. Page Layout and Hyperlinks in MS Word

Skill Sharpeners

A. Click (✓) the correct option:

1. (c) Layout
2. (b) Insert
3. (b) Portrait
4. (b) Insert > Blank Page
5. (c) Layout tab

B. Fill in the blanks:

1. Layout
2. Insert
3. A4
4. Insert
5. Headers, footers

C. True or False:

1. False   2. True
3. True   4. False
5. True

D. Answer the following questions:

1. To set custom margins:
   1. Go to the "**Layout**" tab.
   2. Click on "**Margins**" in the **Page Setup** group.
   3. Select "**Custom Margins**" at the bottom of the dropdown menu.

4. In the **Page Setup** dialog box, adjust the margins as needed.

2. To insert a blank page into your document:

   1. Place the cursor where you want the new page.
   2. Go to the "**Insert**" tab.
   3. Click on "**Hyperlink**" in the Links group.

3. To create ehyperlinks to a website:

   1. Highlight the text or select the object you want to hyperlink.
   2. Go to the "**Insert**" tab.
   3. Click on "**Hyperlink**" in the **Links** group.
   4. In the **Insert Hyperlink** dialog box, enter the **URL for a website** or nagivate to the **file location for a document**.

4. To insert page numbers:

   1. Go to the "**Insert**" tab.
   2. Click on "**Page Number**" in the **Header & Footer** group.
   3. Choose the **location and style** of the page number.

5. Headers appear at the top and footers at the bottom of each page; they are used to display information like page numbers, document title, or author's name.

Art Integration

Do yourself.

3. MS Word : Working with Tables

Skill Sharpeners

A. Click (✓) the correct option:

1. (c) Drawing a table
2. (d) Both b and c
3. (a) Select the cells, right-click, and choose Merge Cells
4. (c) Layout (under Table Tools)
5. (a) Select the column, right-click, and choose Delete Cells

B. Fill in the blanks:

1. Draw Table
2. Tab
3. Design
4. Insert
5. Shading

C. True or False:

1. False   2. True
3. False   4. True
5. False

D. Answer the following questions:

1. • Plae the cursor where you want to insert the table.
   • Go to the Insert tab on the Ribbon.
   • Click on the Table button inthe Tables group.
   • Select Insert Table from the dropdown menu.
   • In the Insert Table dialog box, enter the number of columns and rows you want.
   • Click OK to insert the table.

2. • Select a column by clicking above it.
   • Right-click and choose Insert.
   • Select Insert Columns to

the Right.

3. • Select the cells you want to merge.

   • Right-click and choose Merge Cells.

4. • Select the row or column you want to delete.

   • Right-click and choose Delete Cells.

   • Select Delete Entire Row or Delete Entire Column.

5. • Select the cell(s) where you want to change the text alignment.

   • Go to the Layout tab under Table Tools.

   • In the Alignent group, choose the desired alignment option (e.g., Top, Left, Center, Bottom Right).

Art Integration

Do yourself.

4. Introduction to Spreadsheets and MS Excel

Skill Sharpeners

A. Click (✓) the correct option:

1. (d) Slide
2. (b) Ctrl + S
3. (a) Ctrl + A
4. (d) Next to existing worksheet tabs
5. (b) Press F2

B. Fill in the blanks:

1. cell
2. File
3. Ctrl + P
4. work-book
5. Formula

C. True or False:

1. True
2. False
3. False
4. True
5. False

D. Answer the following questions:

1. • Click on the File tab.

   • Select Open.

   • Browse to the location of the workbook.

   • Select the workbook and click Open.

2. • Click on the plus icon next to the existing worksheet tabs.

   • A new worksheet will be added to the workbook.

3. • A cell range is a group of adjacent cells.

   • Select a range: Click on the first cell, hold down the Shift key, and click on the last cell.

4. • Double-click the worksheet tab you want to rename.

   • Type the new name and press Enter.

5. • Double-click the cell you want to edit.

   • Make the necessary changes.

   • Press Enter to save the changes.

Art Integration

Do yourself.

5. Introduction to Spreadsheets and MS Excel

Skill Sharpeners

A. Click (✓) the correct option:
1. (b) Organizing and analyzing data
2. (a) A box where rows and columns meet
3. (b) = SUM 0
4. (a) A Google account
5. (b) Top right corner

B. Fill in the blanks:
1. spreadsheet   2. letters
3. AVERAGE ( )   4. cell
5. text color

C. True or False:
1. False   2. True
3. False   4. True
5. False

D. Answer the following questions:
1. • Google Sheets is an online spreadsheet tool that allows you to create, edit, and share spreadsheets from any device conneted to the internet.
2. • Bold Text: Select a cell, then click the B icon.
   • Change Text Color: Click the text color icon and choose a color.
3. • The small box where rows and columns meet. Each cell has an address (like A1, B2).
4. • SUM: =SUM(B2:B4)
   • AVERAGE: =AVERAGE (B2:B4)
   • COUNT: =COUNT (A2:A4)
5. • Click the "Share" bottom in the top right corner.
   • Enter the email address of the person you want to share with.
   • Choose their access level (Viewer, Commenter, Editor).
   • Click "Send."

Art Integration

Do yourself.

6. Graphics in MS PowerPoint

Skill Sharpeners

A. Click (✓) the correct option:
1. (a) Title Slide
2. (b) Insert
3. (b) Insert > Picture > This Device
4. (a) SmartArt
5. (d) Grid Layout

B. Fill in the blanks:
1. Title and Content
2. Insert   3. Title Bar
4. SmartArt   5. Insert

C. True or False:
1. False   2. True
3. True   4. True
5. False

D. Answer the following questions:
1. • Used for the introduction, includes placeholders for the presentation title and subtitle.
2. • Click on the content placeholder or go to the "Insert" tab.
   • Click on "Table".
   • Select the number of rows and columns.
   • Enter your data into the table cells.
3. • Click on the content placeholder or go to the

"Insert" tab.

- Click on "SmartArt".
- Choose a SmartArt graphic from the gallery and click "OK".
- Enter your text into the SmartArt graphic.

4. • Click on the content placeholder or go to the "Insert" tab.
   - Click on "Pictures".
   - Choose "This Device" to upload an image from your computer.
   - Select the picture and click "Insert".

5. To insert audio:
   - Go to the "Insert" tab.
   - Click on "Audio".
   - Choose "This Device" to upload an audio fire from your computer.
   - Select the audio file and click "Insert".

   To insert video:
   - Click on the content placeholder to go to the "Insert" tab.
   - Click on "Video".
   - Choose "This Device" to upload a video from your computer or select from online sources.
   - Select the video and click "Insert".

Art Integration

Do yourself.

7. MS PowerPoint–Animations and Transitions

Skill Sharpeners

A. **Click (✓) the correct option:**
1. (c) Animations
2. (d) Click onPreview
3. (c) Transitions tab
4. (b) Apply to All
5. (b) Slide Sorter view

B. **Fill in the blanks:**
1. Animations   2. Effect
3. Animation   4. Apply
5. Slide Sorter

C. **True or False:**
1. False   2. True
3. False   4. True
5. True

D. **Answer the following questions:**
1. • Animations bring elements on your slides to life, while transitions add smooth effects when moving from one slide to the next.
2. • Select the slide title text box.
   - Go to the Animations tab.
   - Click on Add Animation and choose Fly In.
   - Click Preview to see the title fly in.
3. • Animations tab.
4. • Select any slide.
   - Go to the Transitions tab.
   - Choose a transition.
   - Click on Apply to All.
5. To insert audio:
   - Slide Sorter view allows you to see and organize all your slides at once.

Art Integration

Do yourself.

8. Introduction to Google Slides

Skill Sharpeners

A. Click (✓) the correct option:

1. (b) Creating presentations
2. (c) Animation
3. (c) Speaker Notes Section
4. (a) A Google account
5. (b) Click on the "+" button

B. Fill in the blanks:

1. presentations   2. Cell
3. Present   4. Animation
5. design

C. True or False:

1. True   2. False
3. True   4. False
5. False

D. Answer the following questions:

1. Google Slides is an online presentation tool that allows you to create, edit, and share slide decks from any device connected to the internet.

2. Select an object, click "Insert" > "Animation," and choose how it appears, exits, or moves.

3. • Bold
   • Italic
   • Change font and size

4. • Click the "Share" button in the top right corner.
   • Enter the email addresses of people you want to share with.
   • Set their access level (Viewer, Commenter, Editor).

5. Add notes to help you during your presentation.

Art Integration

Do yourself.

9. Internet Browsing and Searching

Skill Sharpeners

A. Click (✓) the correct option:

1. (b) To browse and view websites
2. (b) Gmail
3. (c) Google
4. (c) Have face-to-face meetings over the internet
5. (b) YouTubes

B. Fill in the blanks:

1. interconnected computers
2. Microsoft Edge
3. Amazon
4. definitions
5. Google Maps

C. True or False:

1. False   2. True
3. False   4. True
5. False

D. Answer the following questions:

1. The internet is a global network of interconnected computers that allows people to share information and communicate with each other.

2. Gmail and Yahoo Mail.

3. The primary function of a web

browser is to access and view websites on the internet.

4. You can search for videos on platforms like YouTube or Vimeo by entering your search query in the search bar.

5. Online dictionaries provide definitions, pronunciations, and translations of words.

Art Integration

Do yourself.

10. More About Scratch

Skill Sharpeners

A. Click (✓) the correct option:

1. (a) Hide
2. (b) Say
3. (c) Change
4. (a) Camera

B. Fill in the blanks:

1. looks
2. choose a sound
3. Go
4. Hide
5. John won Neumannss

C. True or False:

1. True   2. False
3. True   4. True

D. Answer the following questions:

1. The purple-coloured blocks indicate Looks block menu. These blocks are applied to change the appearance of a Sprite, such as colour, look, size, etc.

2. • Click on Paint button, the click on Costumes tab.
    • Draw and colour a new Sprite.

• Click on onvert to Bitmap for a smooth vector image.
• Name the Sprite by typing inthe Sprite text box an press Enter.
• Modify size, position, and direction if needed.

3. • Take the mouse on Choose a Backdrop button.
    • Click on Choose a Backdrop, Paint, Surprise, or Upload Backdrop options.
    • Select or draw the new backdrop.
    • The new backdrop appears behind the Sprite.

4. • Click on Sounds tab.
    • Click on Choose a Sound button and select a sound.
    • Use Sound blocks like Pay Sound in the Script area.
    • Click on Go button to pay the script with sound.

Art Integration

Do yourself.

Worksheet-1

Skill Sharpeners

A. Click (✓) the correct option:

1. (a) Lady Ada Lovelace
2. (b) Insert
3. (c) Drawing a table
4. (d) Slide

B. Fill in the blanks:

1. computer programmer
2. A4
3. Insert
4. cell

C. True or False:

1. False   2. False
3. False   4. True

D. Answer the following questions:

1. The IBM PC was one of the first widely popular personal computers, released in 1981.

2. To insert page number:
   - Go to the Insert tab.
   - Click on Page Number in the Header & Footer group.
   - Choose the location and style of the page number.

3. • Select the cells you want to merge.
   - Right Click and choose Merge Cells.

4. • Click on the File tab.
   - Select open.
   - Browse to the location of the workbook.
   - Select the workbook and click open.

Worksheet-2

Skill Sharpeners

A. Click (✓) the correct option:

1. (a) Title Slide
2. (c) Animations
3. (b) To browse and view websites

4. (a) Hides

B. Fill in the blanks:

1. Insert
2. Effect
3. Microsoft Edge
4. Choose a Sound

C. True or False:

1. True   2. False
3. False   4. True

D. Answer the following questions:

1. • Click on the content placeholder or go to the "Insert" tab.
   - Click on "SmartArt".
   - Choose a SmartArt graphic from the gallery and click "OK".
   - Enter your text into the SmartArt graphic.

2. Animations tab.

3. Internet is a global network of interconnected computers that allows people to share information and communicate.

4. The purple-coloured blocks in Scratch that change the appearance of a sprite, like its colour, size, and look.

❏❏

Computer-6

1. Mastering Mail Merge in MS Word 2021

Skill Sharpeners

A. Click (✓) the correct option:

1. (b) Personalizing mass documents
2. (c) Mailings tab
3. (b) Excel spreadsheet
4. (c) Preview Results button
5. (c) Finishing & merging

B. Fill in the blanks:

1. personalized
2. Mailings
3. placeholder
4. Preview
5. Envelops

C. True or False:

1. False   2. True
3. False   4. True
5. True

D. Questions and Answers:

1. Mail Merge in MS Word 2021 is a valuable tool that simplifies the process of creating personalized documents for multiple recipients.

2. To begin a Mail Merge, you need to connect your main document to a data source. The data source provides the specific information that will be inserted into the merge fields within your document.

3. Merge fields are crucial to the Mail Merge process as they define where personalized data will appear in the document. Tese fields pull information from your data source and insert it into the document where the merge field is placed.

4. Before finalizing your Mail Merge, it's important to preview the merged documents to ensure that everything looks correct. This step allows you to verify that the right data is appearing in the correct places.

5. **Edit Individual Documents:** Create a new document containing all the merged letters, which you can review and edit further if needed.

   Print Documents: Send the merged documents directly to the printer.

   Send Email Messages: Send the merged documents as emails if your document is set up for e-mail merge.

E. Assertion-Reason Based Questions:

1. (c) Assertion is true, but Reason is false.
2. (c) Assertion is true, but Reason is false.

F. Source-Based Questions:

- Open the main document (letter template) in MS Word.
- Go to the "Mailings" tab.
  Click "Select Recipients" and choose "Use an Existing List."
- Browse and select the Excel spreadsheet.
- Insert merge fields like (First Name), (Last Name), (Address) into the letter where needed.

- Click "Preview Results" to check.
- Click "Finish & Merge" and choose "Print Documents" to generate personalized letters for all recipients.

Art and Integration

Do yourself.

2. MS Word 2021: Using Functions and Formulas

Skill Sharpeners

A. Click (✓) the correct option:

1. (b) Number
2. (b) MAX
3. (a) Start of a formula
4. (c) *
5. (b) TRUE

B. Fill in the blanks:

1. fill
2. add
3. =(Equal to)
4. true
5. Alignment

C. True or False:

1. False   2. True
3. True   4. False
5. True

D. Questions and Answers:

1. The Format Cells dialog box provides various options for customizing the appearance of your cells, including number formatting, alignment, font, border, fill, and protection.
2. The Alignment tab allows you to control the positioning and orientation of text within a cell, including options like horizontal (Left, Center, Right) and vertical (Top, Middle, Bottom) alignment.
3. SUM adds all the numbers in a specified range, while AVERAGE calculates the mean (average) of the numbers in the specified range.
4. Arithmetic operators allow basic calculations:
   - + (Addition),
     – (Subtration),
     * (Multiplication),
     / (Division),
     ^ (Exponentiation).
5. The IF function performs a logical text and returns one value if the condition is TRUE and another value if the condition is FALSE.

E. Source-Based Questions:

1. - **John should use the SUM function to calculate the total sales** (from: "Sum: =SUM (A1:A5) odds all values in the range A1 to A5.")
   - **John should use the AVERAGE function to calculate the average sales** (rom: "Average: AVERAGE (A1:A5) calculates the average of values inthe range A1 to A5.")
2. - **John can highlight the top-selling product by using Excel's Fill tab options** (From: "The Fill tab provides options for additng background colors or patterns to your cells.")

Art and Integration

Do yourself.

3. Visualize Your Data : Presentation with Charts in MS Excel 2021

Skill Sharpeners

A. Click (✓) the correct option:

1. (c) Line Chart
2. (c) Legend
3. (b) Insert
4. (c) Pie Chart
5. (c) By using the Chart Tools Design tab

B. Fill in the blanks:

1. Column
2. Bar
3. Data Lebels
4. Format Axis
5. Goal

C. True or False:

1. False   2. True
3. False   4. True
5. False

D. Questions and Answers:

1. Line charts connect data points with a line, ideal for showing trends over time or continuous data.

2. • **Select the Chart:** Click on the Chart. Ensure the chart is selected.
   • **Go to Chart Tools Design:** Click on the Chart Tools Design tab.
   • **Click Change Chart Type:** Select Change Chart Type from the dropdown menu.
   • **Choose New Type:** Select a different chart type from the options available.

   Example: Change a Column Chart to a Line Chart to represent trends.

3. • **Access Formatting Options: Click on the Chart:** Select the chart you want to format.
   • **Format Chart Elements:**
     □ **Chart Title:** Click on the title to edit it.
     □ **Axes:** Right-click on the axis and select Format Axis to adjust settings.
     □ **Data Lebels:** Click on the data labels to format them.

4. **Legend:** Identifies different data series in the chart with corresponding colors or patterns.

5. • **Set Up Your Data:** Ensure you have a formula where you want to apply Goal Seek.
   • **Use Goal Seek:**
     □ **Go to Data Tab:** Click on the Data tab.
     □ **Click What: If Analysis:** Select What-If Analysis from the dropdown menu.
     □ **Choose Goal Seek:** Click on Goal Seek.
   • **Set Parameters:**
     □ **Set Cell:** Specify the cell containing the formula.
     □ **To Value:** Enter the desired result.
     □ **By Changing Cell:** Select the cell to adjust.
     Example: Determine

the required sales figure to achieve a target profit.

E. Assertion-Reason Based Questions:

1. (c) Assertion is true, but Reason is false.

   Because pie charts are best for showing proportions, not comparisons.

Art and Integration

- Create a column chart forthe number of fruits sold (e.g., apples, bananas, grapes, oranges).
- Use the Fill option to apply different bright colors to each fruit category.
- Add a Chart Title "Fruits Sold in Week."
- Use a Border around the chart for better visual separation.
- Insert a small fruit-related picture (like an apple or banana) inside the chart using Insert Shapes > Picture to enhance the presentation.
- Customize the font style of the chart labels to make it more playful and colorful.

4. PowerPoint 2021: Advanced Technique for Stunning Presentations

Skill Sharpeners

A. Click (✓) the correct option:

1. (b) Home
2. (c) Slide Show tab
3. (b) Apply to All
4. (d) All of the above
5. (a) Ctrl

B. Fill in the blanks:

1. Home 2. Slide
3. drag 4. slide show
5. Presenter

C. True or False:

1. False 2. False
3. True 4. False
5. False

D. Questions and Answers:

1. When you start a new presentation, you might need more than one slide.

2. • Click on the "Transitions" tab.

   • Choose a transition effect from the gallery.

   • Click "Apply To All" if you want the same transition for all slides.

3. Entrance, Emphasis, Exit, and Motion Paths.

4. • Go to the "Insert" tab.

   • Click on "Video" and choose from "Video on My PC" or "Online Video."

5. Presenter View lets you see your notes and upcoming slides on one screen, while your audience sees only the current slide.

E. Assertion-Reason Based Questions:

(a) Both Assertion and Reason are true, and Reason is correct explanation of Assertion.

F. Source-Based Questions:

- Select the object or text you want to animate.
- Click on the "Animations" tab.
- Choose the "Fade" animation from the gallery.

Art and Integration

- Create a presentation with 3-4 slides.
- Apply a transition effect like "Wipe" to all slides from the "Transitions" tab.
- Apply an animation like "Fly In" to text or images from the "Animations" tab.
- Select a theme from the "Design" tab (for example, "Ion" for a modern, techy look if your topic is about technology).
- The theme is suitable because it provides a professional and cohesive appearance matching the topic of the presentation.

5. Internet

Skill Sharpeners

A. Click (✓) the correct option:
1. (b) Google
2. (c) Sending and receiving electronic mesages
3. (b) Zoom
4. (c) Twitter
5. (b) Cyberbullying

B. Fill in the blanks:
1. Google
2. electronic
3. Online chatting
4. Skype
5. share, interact

C. True or False:
1. False   2. False
3. True   4. False
5. False

D. Questions and Answers:
1. • **Speed:** Emails are delivered almost instantly, allowing for quick communication across the globe.
   • **Convenience:** Emails can be sent and received from any device connected to the internet.
   • **Cost-effective:** Sending an email is free.
   • **Documentation:** Emails provide a written record of communication.
   • **Bulk Communication:** Allows for sending messages to multiple recipients simultaneously.

2. A search engine is a powerful tool that helps users to find specific information on the internet. It operates by indexing web pages and using algorithms to retrieve the most relevant results based on the keywords entered by the user.

3. • **Cost-effective:** Reduces travel expenses.
   • **Time-saving:** Saves time by eliminating travel.
   • **Collaboration:** Facilitates collaboration among remote teams.
   • **Accessibility:** Meetings can be recorded for future reference.

4. • Voice and Video Calls
   • Instant Messaging
   • Screen Sharing
   • File Sharing
   • Group Calls

5. Platforms like Linked in provide opportunities for professional networking, job searching, and career development.

E. Assertion-Reason Based Questions:

1. (a) Both Assertion and Reason are true, and Reason is the correct explanation of Assertion.

2. (c) Assertion is true, but Reason is false.

F. Source-Based Questions:

1. **Advantages:**
   - Ability to share information instantly.
   - Connect with others across the globe.

   Disadvantages:
   - Privacy concerns.
   - Spread of misinformation.

2. • Protect your personal information and adjust privacy settings.
   - Verify information before sharing.
   - Avoid engaging in harmful or disrespectful behavior online.

Art and Integration

Do yourself.

6. AI for all: A Beginner's Guide to Artificial Intelligence

Skill Sharpeners

A. Click (✓) the correct option:

1. (c) Task Automation
2. (b) Physical Strength
3. (b) Processing Power
4. (c) Artificial Intelligence
5. (b) A chess-playing computer

B. Fill in the blanks:

1. Artificial Intelligence
2. intelligence
3. processing power
4. cognitive abilities

5. father

C. True or False:

1. False   2. False
3. False   4. True
5. True

D. Questions and Answers:

1. Artificial Intelligence (AI) is a branch of computer science that focuses on creating machines capable of performing tasks that typically require human intelligence. These tasks include reasoning, learning, problem-solving, perception, language understanding, and more.

2. Humans are considered intelligent due to their advanced cognitive abilities, which include complex thought processes, learning from experience, language and communication, emotional intelligence,and creativity and innovation.

3. The need for AI arises from the desire to enhance human capabilities, solve complex problems and improve efficiency across various domains. AI can process vast amounts of data quickly, peform repetitive tasks with accuracy, and provide insights beyond human capability.

4. **Earlier Computers:** Limited processing power, basic functionality, and no intelligence.

   Modern Computers: Advanced processing power, multifunctional use, and ability to run AI algorithms, learn

from data, and perform tasks requiring cognitive abilities.

5.
- Learning Ability
- Adaptability
- Problem-Solving
- Reasoning
- Creativity
- Self-Awareness

E. Assertion-Reason Based Questions:

1.
- AI drives innovation in fields like healthcare.
- AI can help doctors consult remotely (telemedicine).
- AI enables personalized healthcare services.
- AI systems analyze data for diagnosis and treatment predictions.

  (From: "Innovation: AI drives innovation in fields like healthcare... and from applications of video conferencing in healthcare.")

Art and Integration

Do yourself.

7. Programming with Scratch

Skill Sharpeners

A. Click (✓) the correct option:

1. (b) Motion Block
2. (c) Starts drawing on the stage
3. (a) Wait Block
4. (c) Using the Variables Block
5. (a) Repeats actions indefinitely

B. Fill in the blanks:

1. motion
2. looks
3. pen
4. variable

5. wait

C. Questions and Answers:

1. Sprites are characters in Scratch that you can control and program using blocks. They are used to create animations, games,and interactive stories.

2.
- Drag the "move 10 steps" block from the Motion category.
- Click the block to make the sprite move forward.
- You can change the number of steps by adjusting the value inside the block.

3. The "forever" block is used to continuously repeat the actions inside it until the project stops.

4. Variables Blocks are used to store and manage data like scores, timers, or other information in a project.

5.
- Drag the "swtch backdrop to [backdrop name]" block from the Looks category.
- You can also use the "change [effect] by [number]" block to add visual effects like color or brightness changes.

8. Animation with TupiTube

Skill Sharpeners

A. Click (✓) the correct option:

1. (b) Animation
2. (c) Properties Panel
3. (c) Rotation Tween
4. (a) File
5. (b) File > Export

B. Fill in the blanks:

1. animations
2. Stage Area
3. Scene
4. coloring
5. Timeline

C. True or False:

1. False   2. True
3. False   4. False
5. True

D. Questions and Answers:

1. TupiTube is a user-friendly, open-source animation software designed for creating animations and interactive stories.

2. • Toolbar
   • Timeline
   • Stage Area
   • Properties Panel

3. A scene is a distinct section or part of your animation that can contain different backgrounds, characters (sprites), and actions.

4. • Select the object.
   • Go to Animation > Add Rotation Tween.
   • Enter starting and ending rotation angles in the properties panel.
   • Adjust timing using the timeline.
   • Click Play to preview.

5. • Click on File.
   • Select Export.
   • Choose Export as Video.
   • Select desired video settings and click Export.

E. Assertion-Reason Based Questions:

1. (a) Both Assertion and Reason are true, and Reason is the correct explanation of Assertion.

2. (d) Both Assertion and Reason are false.

F. Source-Based Questions:

1. TupiTube is a free and open-source animation software that enables users to create animations and interactive stories through a simple, user-friendly interface.

2. • Easy to use and beginner-friendly interface.
   • No need for complex programming knowledge.
   • Supports creating animations and interactive stories.
   • Free and open-source.

Worksheet-1

A. Click (✓) the correct option:

1. (b) MAX
2. (c) Line Chart
3. (c) Finishing & tab
4. (c) Slide Show tab
5. (c) *

B. Questions and Answers:

1. • Set Up Your Data: Ensure you have a formula where you want to apply Goal Seek.
   • Use Goal Seek:
     □ **Go to Data Tab:** Click on the Data tab.
     □ **Click What: If Analysis:** Select What-If Analysis from the dropdown menu.
     □ **Choose Goal Seek:**

Click on Goal Seek.

- **Set Parameters:**
  - □ **Set Cell:** Specify the cell containing the formula.
  - □ **To Value:** Enter the desired result.
  - □ **By Changing Cell:** Select the cell to adjust.

    Example: Determine the required sales figure to achieve a target profit.

2. • Click on the "Transitions" tab.
   • Choose a transition effect from the gallery.
   • Click "Apply to All", if you want the same transition for all sides.

3. **Edit Individual Documents:** Create a new document containing all the merged letters, which you can review and edit further if needed.

   Print Documents: Send the merged documents directly to the printer.

   Send Email Messages: Send the merged documents as emails if your document is set up foremail merge.

4. • IF function perfoms a logical test and returns one value if the condition is TRUE and another value if the condition is FALSE.

5. SUM adds all numbers in a specific range, while AVERAGE calculates the mean (average) of the numbers in the specific range.

C. **Fill in the blanks:**
1. Mailings
2. Presenter
3. Data Labels
4. add
5. Envelops

D. **True or False:**
1. True   2. False
3. False   4. False
5. False

Worksheet-2

A. **Click (✓) the correct option:**
1. (c) Twitter
2. (a) Repeats actions idenfinitely
3. (a) File
4. (b) Animation
5. (c) Artificial Intelligence

B. **Questions and Answers:**
1. Variables Blocks are used to store and manage data like scores, timers, or other information in a project.

2. Humans are considered intelligent due to their advanced cognitive abilities, which include complex thought processes, learning from experience, language and communication, emotional intelligence,and creativity and innovation.

3. • Voice and video calls
   • Instant messaging
   • File sharing
   • Screen sharing
   • Groups calls

4. • **Speed:** Emails are delivered almost instantly, allowing for quick communication

across the globe.

- **Convenience:** Emails can be sent and received from any device connected to the internet.

- **Cost-effective:** Sending an email is free.

- **Documentation:** Emails provide a written record of communication.

- **Bulk Communication:** Allows for sending messages to multiple recipients simultaneously.

5. A scene is a distinct section or part of your animation that can contain different backgrounds, characters (sprites), and actions.

C. **Fill in the blanks:**

1. variable

2. animations

3. cognitive abilities

4. share, interact

5. father

D. **True or False:**

1. True   2. False

3. True   4. False

5. False

❑❑

Computer-7

1. Unlocking the Digital World: Computer Systems & Their Languages

Skill Sharpeners

A. Click (✓) the correct option:
1. (b) CPU
2. (c) Keyboard
3. (c) Supercomputer
4. (b) System software
5. (d) SGL

B. Fill in the blanks:
1. CPU
2. First Generation
3. Mainframe
4. Linux
5. Output

C. True or False:
1. False   2. True
3. True   4. False
5. False

D. Match the Columns:
1. (e), 2. (d), 3. (c), 4. (b), 5. (a).

E. Questions and Answers:
1. The CPU is reponsible for processing instructions and performing calculations.
2. Keyboard and Mouse.
3. Supercomputers are used for specialized tasks such as scientific simulations, weather forecasting, and cryptography.
4. System software manages hardware and provides an interface between user and specific tasks (like Paint, Antivirus).
5. Languages based on solving problems using constraints and logic, used in artificial intelligence and expert systems.

F. Assertion-Reason Based Questions:
1. (a) Both Assertion and Reason are true, and Reason is the correct explanation of Assertion.
2. (a) Both Assertion and Reason are true, and Reason is the correct explanation of Assertion.

G. Source-Based Questions:
1. Software is a collection of programs stored in digital form to solve problems and operate a computer.
2. Software is stored in computer memory.
3. Software is classified into two types: System Software and Application Software.

Art and Integration

Do yourself.

2. Decoding the Binary Universe: Understanding the 0's and 1's

Skill Sharpeners

A. Click (✓) the correct option:
1. (c) 2
2. (a) 1010
3. (a) 0011
4. (d) 10111
5. (b) Subtraction

B. True or False:
1. False   2. True
3. False   4. True
5. False

C. Match the Columns:
1. (a), 2. (c), 3. (b), 4. (d), 5. (e).

D. Fill in the blanks:
1. base-10 number
2. 0, 1
3. division by 2
4. 0, 1   5. 1's

E. Questions and Answers:
1. 1100

2. • Divide the decimal number by 2.

   • Record the quotient and the remainder.

   • Repeat this process until the quotient becomes 0.

   • Read remainders from bottom to top to get the binary number.

3. • 1's complement is found by flipping all the bits (0s to 1s,, 1s to 0s).

   • 2's complement is found by taking the 1's complement and adding 1.

4. • Subtract bit by bit, borrowing, if necessary.

   • Use binary subtraction rules like 1-0=1, 1-1=0, and borrowing, if needed from higher bits.

5. Because electronic devices operate with two states (on and off), binary (0 and 1) makes it easy to represent data and operations.

F. Assertion-Reason Based Questions:

1. (a) Both Assertion and Reason are true, and Reason is the correct explanation of Assertion.

   (b) Both Assertion and Reason are true, and Reason is the correct explanation of Assertion.

G. Source-Based Questions:

1. Suggest him ways to do so →

• Divide 6 by 2 → quotient 3, remainder 0

• Divide 3 by 2 → quotient 1, remainder 1

• Divide 1 by 2 → quotient 0, remainder 1

• Read remainders from bottom to top: 110

   Thus, 6 in decimal = 110 in binary.

Art and Integration

Do yourself.

3. Mastering Data: A Journey Through Database Management

Skill Sharpeners

A. Click (✓) the correct option:

1. (d) All of the above
2. (b) Link two tables together
3. (c) Flat-file
4. (b) Primary Key
5. (b) Oracle

B. Fill in the blanks:

1. primary
2. integrity
3. tables
4. Foreign
5. data sheet

C. True or False:

1. False   2. True
3. False   4. False
5. True

D. Match the Columns:

1. (d), 2. (b), 3. (c), 4. (a).

E. Questions and Answers:

1. A database is an organized collection of data for easy access and management.

   Example: A school library catalog storing book details like title, author, and publication year.

2. DBMS acts as an intermediary between the user and the database. It helps to store, retrieve, update, and manage data efficiently, while ensuring security and integrity.

3. • **Primary Key:** Uniquely identifies each record in a table.

   • **Foreign Key:** Refers to the primary key of another table to establish a relationship between tables.

4. Three advantages of using a DBMS are:

1.   **Faster Information Retrieval**
•   **Quick Access:** Through the use of queries, a DBMS allows for rapid retrieval of information. This speed is crucial for applications requiring immediate access to data, such as online transactions or reporting systems.

2.   **Support for Concurrent Updates**
•   **Simultaneous Access:** Multiple users can update the database at the same time without causing conflicts or data corruption. The DBMS manages these concurrent updates to ensure data consistency and accuracy.

3.   **Recovery of Data**
•   **Data Protection:** In the event of a system failure, the DBMS provides mechanisms for data recovery, ensuring that information is not lost and can be restored to a previous state.

5.   •   Open MS Access 2021.
•   Create a new table.
•   Define fields (columns) and set field types.
•   Set a primary key (eg : Student ID)
•   Save the table.

F.   Assertion-Reason Based Questions:
1.   (b) Both A and R are true, but R is not the correct explanation of A.

(Controlled redundancy is because of centralized storage, not concurrent access.)

2.   (d) A is false, but R is true.

(Primary key cannot have duplicates; Foreign key is used to link tables.)

G.   Source-Based Questions:
•   **Primary Key:**

→ In the Student table: Student ID

→ In the Department table: Dept. No.

•   **Foreign Key:**

→ In the Student table: Dept. No.

Art and Integration

Do yourself.

4. HTML Unveiled : The Building Blocks of the Web

Skill Sharpeners

A.   Click (✓) the correct option:
1.   (a) <h1>
2.   (b) href
3.   (c) <p>
4.   (c) <body style="background-color:Red">
5.   (c)

B.   Fill in the blanks:
1.   <a>
2.   <b>
3.   <head>
4.   style
5.   <body>

C.   True or False:
1.   True   2. False
3.   True   4. False
5.   False

D.   Questions and Answers:
1.   HTML or Hyper Text Markup Language is not a programming language but a markup language. It describes the structure of web pages using tags. HTML allows web browsers to interpret and display text, images, videos, and other content in a meaningful and visually appealing way. It is important

because every web page on the internet is built using HTML.

2. The <p> tag is used to define a paragraph in HTML. It is a block-level element used to display blocks of text.

3. To create a hyperlink, use the <a> tag with the href attribute. Example:

Go to Google

4. • **Block-level elements** start on a new line and take up the full width available. Examples: <h1>, <p>, <div>.
   • **Inline elements** only take up as much width as necessary and do not start on a new line. Examples: <span>, <a>, <img>.

5. You can change the background color by using the style attribute inside the <body> tag. Example: <body style"background-color: lightblue;">

E. 1. (c) The assertion is correct, but the reason is incorrect.
   2. (c) The assertion is correct, but the reason is incorrect.

F. Source Based Question
   1. Title (Appears in the browser tab): The browser tab will show "My Favorite Hobby" — this is defined inside the <title> tag in the <head> section.
   2. Main Heading on the Webpage: On the actual webpage, a large bold heading "Painting" will appear. This is displayed using the <h1> tag.
   3. Paragraph Text: Just below the heading, a paragraph will be shown with the text: "I love painting landscapes and portraits. My favorite medium is watercolor."

   This is enclosed within the <p> (paragraph) tag.

   4. Hyperlink (Clickable Text):
   Below the paragraph, a

clickable link will appear with the text: "View My Gallery" When clicked, this link will take the user to:

https://www.example.com/gallery

This is created using the <a> (anchor) tag with the href attribute.

Art and Integration

Do yourself.

5. Crafting Web Magic: Based on HTML

Skill Sharpeners

A. Click (✓) the correct option:
1. (b) <!--,-->
2. (a) alt
3. (b)
4. (c) href="https://example.com">Click here
5. (b) bgcolor

B. Fill in the blanks:
1.
2. <!--, -->
3. URL
4. src
5. ordered, unordered

C. True or False:
1. False   2. False
3. True   4. True
5. False

D. Questions and Answers:
1. The comment tag is used to insert notes in the HTML code that are not displayed in the browser. It helps developers understand the structure and purpose of the code.
2. By using the <ol> tag. Example:
html
CopyEdit

```
<ol>
    <li>Item 1</li>
    <li>Item 2</li>
</ol>
```

3. Attributes of the <img> tag.

. • src: The URL or file path of the image.

• alt: Descriptive text displayed if the image doesn't load.

• width: The width of the image (in pixels).

• height: The height of the image (in pixels).

• title: Text that appears when you hover over the image.

4. External links point to another website using a full URL. Internal links navigate to sections within the same page or to another page on the same website.

5. A nested list is a list inside another list, often used to represent subcategories or hierarches.

E. Assertion-Reason Based Questions:

(a) Both assertion and reason are correct, and the reason explains the assertion.

(c) The assertion is correct, but the reason is incorrect.

F. Source-Based Questions:

1. Attributes of the <img> tag and their purpose:

• src="https://example.com/html.jpg" specifies the image source.

• alt="HTML Image" provides alternative text if the image doesn't load.

2. Paragraph-based questions:

1. Hyper Text Markup Language.

2. HTML is the standard markup language for creating web pages. It describes the structure of a page and uses elements to define how content is displayed.

3. Tim Berners Lee.

Art and Integration

Do yourself.

6. Python Basics : Your First Step into Python

Skill Sharpeners

A. Click (✓) the correct option:

1. (c) Complex Syntax
2. (b) 8
3. (b) variable_1
4. (b) = =
5. (b) import math

B. Fill in the blanks:

1. #
2. BODMAS
3. Float
4. displaying
5. object

C. True or False:

1. False   2. True
3. True   4. False
5. False

D. Match the Columns:

1. (d)   2. (a)
3. (e)   4. (b)
5. (c)

E. 1. • **Interactive Mode:** You enter code directly into the Python interpreter and get immediate result.

• **Script Mode:** You write Python code in a file with a .py extension and run the entire script.

2. A syntax error happens when Python code violates grammar rules.

Example:

python

Copy Edit

print ("Hello) # Missing closing quote

This produces :

typescript

CopyEdit

SyntaxError : EOL while scanning string literal

3. Comparison operators compare two values and return True of False.

Examples :

- = = : Checks if two values are equal → 5 = = 5 → True
- ! = : Checks if two values are not equal 5 → ! = 3 → True
- > : Checks if one value is greater than the other : → 5 > 3 → True

4. A variable is a container for storing data values.

   x = 5

   name = "Alice"

   print (x, name) # output : 5 Alice

5. 1. Install Python and open IDLE from the Start Menu.

   2. Click of **File > New File** to open the editor.

   3. Write Python code and save it with a .py extension.

   4. Press **F5** or click **Run > Run Module** to execute the script.

F. **Assertion-Reason Based Questions:**

1. (a) Both Assertion and Reason are true, and Reason is the correct explanation of the Assertion.

2. (c) Assertion it true, but Reason is false.

G. **Source 1:**

1. x is less than y

2. python
   CopyEdit
   x = 20
   y = 10
   if x > y :
   print ("x is greater than y")
   else :
   print ("x is not greater than y")

Source 2:

1. result = 15 + 2 – 2 = 15

2. result = 5 * (3 + 2) – 4 / 2
   This changes the order to :
   5 * 5 – 2 = 25 – 2 = 23

Art and Integration

Do yourself.

7. Deep Dive into Python : Expanding Your Coding

Skill Sharpeners

A. Click (✓) the correct option:
1. (c) Conditional statement
2. (b) Greater
3. (b) B
4. (c) break
5. (b) while loop

B. Fill in the blanks:
1. True
2. if
3. break
4. while
5. elif

C. True or False:
1. False
2. True
3. True
4. True
5. False

D. Match the Cojumns:
1. (d)
2. (c)
3. (e)
4. (b)
5. (a)

E. Questions and Answers:
1. To execute a block of code only when a specific condition is true.
2. if executes code when the condition is true; if...else handles both true and false outcomes.
3. To repeatedly execute a block of code as long as the condition remains true.
4. When you need to check multiple conditions after the initial if.
5. It immediately exits the loop, even if the loop condition is still true.

F. 1. (c) Assertion is true, but Reason is false.
2. (c) Assertion is true, but Reason is false.

G. Source-Based Questions
1. (a) **Output :** Equal to 5
   (b) **Explanation :** Because x = = 5 is ture, so the elif block is executed.
2. (a) **Value of counter when loop stops :** 3

(b) **Loop executes :** 2 times (for counter = 1 and 2)

Art and Integration

Do yourself.

8. Cloudy With a Chance of Computing : An Introduction to Cloud Computing

Skill Sharpeners

A. Click (✓) the correct option:
1. (c) Distributed Cloud
2. (a) Software as a Service
3. (b) PaaS
4. (b) 2006
5. (c) Security Concerns

B. Fill in the blanks:
1. demand
2. Hybrid Cloud
3. Amazon   4. cost
5. SaaS

C. True or False:
1. False   2. True
3. False   4. False
5. True

D. Questions and Answers:
1. Cloud computing offers scalable, on-demand services charged by usage and includes tools beyond hosting, while traditional hosting provides fixed resources with a fixed charge.
2. Infrastructure as a Service (IaaS) provides virtualized computing resources like service and storage over the internet.
3. **Scalability :** Easily scale resources up or down based on demand.
    Cost Efficiency : Pay only for what you use, reducing the need for large capital expenditures.
    Accessibility : Access services from anywhere with an internet connection.
4. A service offered over the public internet, available to anyone who wants to purchase

them.
5. Storing patient records and telemedicine.

E. 1. (a) Both Assertion and Reason are true, and Reason is the correct explanation of Assertion.
2. (d) Both Assertion and Reason are false.

F. 1. Cloud computing refers to the delivery of computing services such as storage, servers, and software over the internet.
2. The approach of **cloud computing.**

Art and Integration.

Do yourself

9. Elevating the Clouds: Advance Concept of Cloud Computing

Skill Sharpeners

A. Click (✓) the correct option:
1. (b) Low Latency
2. (c) Managing Servers Manually
3. (a) Data Encryption
4. (b) Predictive Analytics
5. (c) Complex Problem Solving

B. Fill in the blanks:
1. Edge
2. Serverless Computing
3. encryption
4. Artificial Intelligence
5. Quantum

C. True or False:
1. False   2. False
3. True   4. False
5. True

D. Short Answer Questions :
1. Edge Computing processes data closer to where it is generated, reducing latency, saving bandwidth, and improving efficiency, especially in real-time applications.
2. Serverless Computing is a model where the cloud provider manages resources

automatically, letting developers focus on code and pay only for compute time used.

3. Predictive Analytics: Al algorithms can predict future trends based on historical data. Natural Language Processing (NLP) : Enables the creation of applications that understand and generate human language.

4. It uses quantum mechanics to perform complex calculations exponentially faster than traditional computers.

5. By using energy-efficient data centers, virtualization, and renewable energy to reduce environmental impact.

E. 1. (a) Both A and R are true, and R is the correct explanation of A.

2. (d) A is false, but R is true.

F. Source-Based Questions

1. The main industries driving the adoption of Edge Computing are autonomous vehicles, smart grids, and industrial IoT.

2. Edge Computing contributes to real-time processing by processing data closer to where it is generated, which reduces latency, saves bandwidth, and improves the efficiency of cloud services.

Art and Integration.

Do yourself

10. The AI Revolution : Exploring the Future of Technology

Skill Sharpeners

A. Click (✓) the correct option:

1. (b) Predictive analytics for early diagnosis
2. (b) Quantum Computing
3. (b) Internet of Things
4. (b) Data privacy
5. (b) Decentralized and transparent transaction

B. Fill in the blanks:

1. IoT
2. CRISPR–Cas9
3. qubits
4. Intelligent tutoring
5. Ethical concern

C. True or False:

1. False   2. True
3. False   4. False
5. False

D. Assertion-Reason Based Question :

1. (a) Both A and R are true, and R is the correct explanation of A.
2. (d) A is false, but R is true.

E. Source-Based Questions

1. Internet of Things.
2. Learning from the data they collect.
3. It manages and analyzes the vast amounts of data generated by IoT devices.
4. Smarter homes, cities, and healthcare systems.
5. By connecting to the internet.

Art and Integration.

Do yourself

Worksheet-1

A. Click (✓) the correct option:

1. (a) 0011
2. (b) Primary key
3. (c) Keyboard
4. (b) Bgcolor
5. (a) <b1>

B. Fill in the blanks:

1. style
2. <!-- , -->
3. monitor
4. datasheet
5. 0, 1

C. True or False:

1. False   2. True
3. False   4. False
5. True

D. 1. To create a hyperlink, use the <a> tag with the href attribute. Example:

Go to Google

2. Supercomputers are used for specialized tasks such as scientific simulations, weather forecasting, and cryptography.

3. Tree advantages of using a DBMS are:

   1. Faster Information Retrieal

   Quick Access: Through the use of queries, a DBMS allows for rapid retrieval of information. This speed is crucial for applications requiring immediate access to data, such as online transactions or reporting systems.

   2. Support for Concurrent Updates

   Simultaneous Access: Multiple users can update the database at the same time without causing conflicts or data corruption. The DBMS manages these concurrent updates to ensure data consistency and accuracy.

   3. Recovery of Data

   Data Protection: In the event of a system failure, the DBMS provides mechanisms for data recovery, ensuring that information is not lost and can be restored to a previous state.

4. • Subtract bit by bit, borrowing if necessary.

   • Use binary subtaction rules like 1-0=1, 1-1=0, and borrowing if needed from higher bits.

5. The <p> tag is used to define a paragraph in HTML. It is a block-level element used todisplay blocks of text.

Worksheet-2

A. Click (✓) the correct option:
1. (b) Quantum Computing
2. (b) Import math
3. (c) Break
4. (a) Data Encryption
5. (c) Complex

B. Fill in the blanks:
1. SaaS
2. Edge
3. qubits
4. while
5. float

C. True or False:
1. False
2. False
3. False
4. True
5. False

D. 1. (a) A syntax error occurs when the Python interpreter detects a violation of the Python grammar rules.

   Example

   print ("Hello) Missing closing quote

   The interpreter will return :

   syntaxError: EOL while scanning string literal

2. A service offered over the public internet, available to anyone who wants to purchase them.

3. **Predictive Analytics:** AI algorithms can predict future trends based on historical data.

   Natural Language Processing (NLP) : Enables the creation of applications that understand and generate human language.

4. By using energy-efficient data centers, virtualization, and renewable energy to reduce environmental impact.

5. A service offered over the public internet, available to anyone who wants to purchase them.

❑❑

Computer-8

1. Computer Networking

Skill Sharpeners

A. Click (✓) the correct option:
1. (d) All of the above
2. (b) To connect different networks and manage data traffic
3. (b) Star Topology
4. (b) Wi-Fi
5. (d) WAN

B. Fill in the blanks:
1. switch
2. ring
3. MAC address
4. Computer
5. hub

C. True or False:
1. True
2. False
3. False
4. True
5. False

D. Questions and Answers:
1. Devices (computers, servers, networking devices), communication medium (wired and wireless), Network Interface Cards (NICs), protocols, switches, and routers.
2. If one cable fails, the other devices remain unaffected. It is easy to add new devices without disrupting the network.
3. Protocols are a set of rules that determine how data is transmitted over the network and ensure that devices can communicate effectively.
4. Wireless technologies like Wi-Fi and Bluetooth allow devices to connect without cables, providing flexibility, mobility, and enabling quick and easy connections, even on the move.
5. **Single point of failure:** If the server goes down, all clients lose access. **High cost:** Setting up and maintaining servers is expensive.

E. Assertion-Reason Questions:
1. (a) Both assertion and reason are true, and the reason is the correct explanation for the assertion.
2. (c) The assertion is true, but the reason is false.

F. Case-Based Question:
1. In star topology, if one cable fails, other devices remain unaffected. It is easier to add new devices and the network becomes more reliable and easier to maintain.
2. Higher cost due to more cabling and the need for a central hub or switch. The transition might cause temporary disruption while setting up the new structure.

Art Integration
Do yourself

2. Computer Crime and Ethics

Skill Sharpeners

A. Click (✓) the correct option:
1. (b) The moral principles governing the use of computers
2. (c) Virus
3. (c) Deceiving users into providing personal information
4. (a) Commandment 1
5. (b) Frequent crashes and slow speed

B. **Fill in the Blanks:**
1. moral
2. worm
3. Spam
4. Cyberbullying
5. firewall

C. **True/False:**
1. True   2. True
3. False   4. True
5. False

D. **Question and Answer:**
1. The Ten Commandments of Computer Ethics are a set of guidelines that promote responsible and respectful behavior in digital environments.
   - **Commandment 1:** Thou shalt not use a computer to harm other people.
   - **Commandment 3:** Thou shalt not snoop around in other people's computer files.
   - **Commandment 6:** Thou shalt not copy or use proprietary software for which you have not paid.
2. Phishing involves sending fake emails or messages pretending to be from trustworthy sources to trick users into sharing personal information.
   Pharming redirects users from legitimate websites to fake ones without their knowledge, usually by altering DNS settings.
3. • Install antivirus software
   - Perform regular system scans
   - Enable real-time protection
   - Be cautious with downloads
   - Backup data regularly

4. A firewall is a security system that monitors and controls incoming and outgoing network traffic based on security rules. It helps prevent unauthorized access to systems and data.
5. Cyberbullying is the use of technology to harass, intimidate, or harm others. It can occur through social media, messaging apps, or online games and may lead to anxiety, depression, and even suicidal thoughts.

E. **Assertion-Reason Questions:**
1. (a) Both assertion and reason are true, and the reason is the correct explanation for the assertion.
2. (d) The assertion is false, but the reason is true.

F. **Case-Based Question:**
- **Do not click the link:** It might redirect to a fraudulent website (pharming).
- **Verify the source:** Check the sender's email address carefully.
- **Contact the bank directly:** Use a trusted phone number or website, not the link in the email.
- **Report the email:** Report to a parent, teacher, or cybercrime cell.
- **Delete the message:** Remove the risk of accidentally clicking it later.

Art Integration
Do yourself

3. Understanding HTML Attributes and CSS Selectors

Skill Sharpeners

A. **Click (✓) the correct option:**
1. (b) href

2. (b) #idName
3. (a) *
4. (c) <link rel="stylesheet" href="stylesheet.css">
5. (b) Class selector

B. Fill in the Blanks:
1. href
2. Cascading Style Sheets
3. class
4. style
5. link

C. True/False:
1. False   2. True
3. False   4. True
5. True

D. Question and Answer:
1. HTML attributes provide additional information about HTML elements. They are always included in the opening tag and usually come in name/value pairs like name="value".
2. CSS selectors are used to select and style HTML elements based on their attributes, id, class, or type.
3. The ID selector targets a specific element with a unique id, while the Class selector can be used for multiple elements sharing the same class name.
4. Inline styles are applied directly to elements using the style attribute. External stylesheets are separate CSS files linked to the HTML document using the <link> tag.
5. By using the <link rel="stylesheet" href="style.css"> tag inside the <head> section of the HTML document.

E. Assertion-Reason Questions:
1. (d) The assertion is false, but the reason is true.
2. (a) Both assertion and reason are true, and the reason is the correct explanation for the assertion.

F. Case-Based Question:
1. <link rel="stylesheet" href="style.css">
2. Use a class attribute like class="product" in both <div> and <p> tags and define product in the CSS.
3. No, because the ID must be unique within a page and cannot be used for multiple elements.

Art Integration

Do yourself

4. Developing Interactive Web Pages

Skill Sharpeners

A. Click (✓) the correct option:
1. (d) All of the above
2. (b) prompt()
3. (b) onclick
4. (c) parseInt("25")
5. (a) alert()

B. Fill in the Blanks:
1. const
2. toString()
3. onmouseover
4. function
5. onkeydown

C. True/False:
1. True   2. False
3. True   4. False
5. True

D. Question and Answer:
1. Variables in JavaScript store data that can be used and manipulated throughout the program.
2. JavaScript supports basic arithmetic operations such as Addition (+), Subtraction (-),

Multiplication (*), Division (/), and Modulus (%).

3. JavaScript provides the parseInt() function to convert strings into integers.

4. JavaScript listens for onclick events on buttons and executes the appropriate function.

5. The onmouseover event is triggered when the user hovers the mouse over an element. The onmouseout event is triggered when the mouse leaves the element.

E. Assertion-Reason Questions:

1. (a) Both assertion and reason are true, and the reason is the correct explanation for the assertion.

2. (b) Both assertion and reason are true, but the reason is not the correct explanation for the assertion.

F. Case-Based Question:

1. alert()

2. onclick

3. By using JavaScript to update the content dynamically without reloading the page.

Art Integration

Do yourself

5. Turtle Programming in Python

Skill Sharpeners

A. Click (✓) the correct option:

1. (c) pensize()

2. (a) fillcolor(), begin_fill(), end_fill()

3. (c) clear()

4. (b) my_turtle.circle(50, 180)

5. (b) Leaves a copy of the turtle's shape at its current position.

B. Fill in the Blanks:

1. import turtle

2. speed

3. bye()

4. clone

5. four

C. True/False:

1. True

2. False

3. True

4. True

5. True

D. Question and Answer:

1. You can fill shapes with color using the fillcolor(), begin_fill(), and end_fill() methods.

2. You can easily draw circles using the circle() method, which takes the radius as an argument.

3. To create parallel lines, you can lift the pen up and reposition the turtle without drawing. This is achieved using the penup() and pendown() methods.

4. • If you want to clear all drawings from the screen without closing the Turtle graphics window, you can use the clear() method.

   • To reset the turtle's position and clear the screen completely, use the reset() method.

5. You can use the fillcolor() method to set the color and the pensize() method to change the thickness of the lines drawn by the turtle.

E. Assertion-Reason Questions:

1. (a) Both assertion and reason are true, and the reason is the correct explanation for the assertion.

2. (b) Both assertion and reason are true, but the reason is not the correct explanation for the assertion.

F. Case-Based Question:

To draw a star shape using Turtle graphics, the student should change the turning angle to 144 degrees instead of 60. The turtle should repeat the forward(100) and right(144) commands five times to complete the five-pointed star. The correct angle for a regular five-pointed star is 144°.

Art Integration

Do yourself

6. "The Next-Gen Internet: Smarter, Faster, and Unstoppable!"

Skill Sharpeners

A. Click (✓) the correct option:
1. (b) IoT
2. (c) Quantum Internet
3. (b) A 3D digital universe
4. (c) Brain-Computer Interface
5. (b) Space Internet

B. Fill in the Blanks:
1. Artificial Intelligence
2. 5D Internet
3. Internet of Things
4. Holographic Communication
5. Metaverse

C. True/False:
1. True   2. False
3. True   4. False
5. True

D. Question and Answer:
1. This is all possible with the Internet of Things (IoT), where everyday objects are connected to the internet, making life easier and smarter.
2. The future of the internet will be powered by Artificial Intelligence (AI), making search engines smarter, voice assistants sharper, and recommendations more personalized.
3. With super-speed internet, video calls will feel as real as face-to-face conversations, and online gaming will have zero lag. The possibilities are endless!
4. Smart Cities will use sensors, AI, and real-time data to control traffic lights, monitor air quality, and even manage electricity usage efficiently.
5. Brain-Computer Interface (BCI) technology is being developed to connect human brains directly to the internet. This could help people with disabilities control devices using only their thoughts.

F. Case-Based Question:
1. (b) Artificial Intelligence
2. (a) By providing customized lessons and instant feedback
3. (b) Holographic Communication

Art Integration

Do yourself

7. Artificial Intelligence and Its Application

Skill Sharpeners

A. Click (✓) the correct option:
1. (b) To create systems that can perform tasks requiring human intelligence
2. (c) American Psychological Association (APA)
3. (b) Narrow AI
4. (b) Diagnosing diseases from medical images
5. (b) A machine's ability to exhibit intelligent behavior similar to a human

B. Fill in the Blanks:
1. computer science

2. learning
3. Narrow
4. Turing
5. reasoning

C. True/False:

1. False   2. True
3. True   4. False
5. False

D. Question and Answer:

1. Artificial Intelligence (AI) is a branch of computer science that focuses on creating systems capable of performing tasks that typically require human intelligence.

2. • Data Privacy
   • Bias and Fairness

3. • Learning
   • Reasoning
   • Problem Solving

4. • Narrow AI refers to systems designed to perform specific tasks.
   • General AI refers to a hypothetical type of AI that can understand, learn, and apply knowledge across a wide range of tasks, similar to human cognitive abilities.

5. • The Turing Test is a measure of a machine's ability to exhibit intelligent behavior indistinguishable from that of a human.
   • It serves as a benchmark for AI and pushes research in machine learning and natural language processing.

E. Assertion-Reason Questions:

1. (a) Both assertion and reason are true, and the reason is the correct explanation for the assertion.

2. (d) The assertion is false, but the reason is true.

F. Case-Based Question:

Benefits:
• AI algorithms can analyze medical images to detect anomalies like tumors or fractures.
• AI improves early diagnosis and treatment effectiveness.

Challenge:
• Data Privacy

How to address the challenge:
• Ensuring data protection measures are in place is essential to maintain user trust.

Art Integration:

Do yourself

8. Robotics

Skill Sharpeners

A. Click (✓) the correct option:

1. (b) A programmable machine that can perform tasks automatically
2. (c) Industrial robots
3. (c) Actuators
4. (b) Ultrasonic Sensor
5. (c) Limited applications

B. Fill in the Blanks:

1. computer
2. Service
3. power supply
4. sensors
5. Turing

C. True/False:

1. False   2. False
3. True   4. True
5. False

D. Question and Answer:

1. Power Supply, Microcontroller, Sensors, Actuators, Chassis.

2. • Industrial Robots: Used in manufacturing and

assembly lines for tasks like welding and packaging.

- Medical Robots: Assist in surgeries, rehabilitation, and patient care.

3. Sensors help robots perceive their environment, such as measuring distance, detecting heat, and capturing images or videos.

4. Programming enables robots to perform tasks, respond to sensors, and make decisions. It is essential for robot functionality.

5. Safety Concerns, High Costs, Complexity of Programming, Ethical Issues.

E. Assertion-Reason Questions:

1. (a) Both assertion and reason are true, and the reason is the correct explanation for the assertion.

2. (d) The assertion is false, but the reason is true.

F. Case-Based Question:

Benefits:

- Robots can work continuously without fatigue, improving productivity.
- They can reduce human error and handle repetitive or hazardous tasks.

Challenges:

- Safety concerns when working alongside humans.
- High development and implementation costs.
- Complexity in programming robots to adapt to dynamic environments.

Art Integration:

Do yourself

9. Green Computing– The Future of Sustainable Technology

Skill Sharpeners

A. Click (✓) the correct option:

1. (b) Reduce environmental impact of technology
2. (c) Using energy-efficient hardware
3. (c) Fossil fuels
4. (b) Reduces reliance on physical hardware
5. (b) Designing energy-efficient components

B. Fill in the blanks:

1. Green Computing
2. electricity
3. Cloud
4. solar
5. electronic

C. True/False:

1. False   2. True
3. False   4. True
5. False

D. Question and Answer:

1. Green computing refers to the environmentally responsible use of computers and related resources. It includes designing, using, and disposing of hardware and software in ways that reduce their impact on the environment.

2. • Saves energy and reduces electricity bills.
   • Reduces harmful electronic waste.
   • Helps in fighting global warming by lowering pollution.
   • Increases the lifespan of electronic devices.
   • Encourages the development of eco-friendly technologies.

3. Lowering energy use reduces reliance on fossil fuels, cutting down pollution and

greenhouse gases. Reducing electronic waste minimizes toxic materials entering the environment and promotes recycling and reuse.

4. Green Computing saves energy, reduces pollution, and minimizes waste. This protects natural resources, reduces global warming, and ensures a cleaner and safer environment for future generations.

5. The future of Green Computing includes the use of solar-powered and biodegradable devices, energy-saving hardware and software, smart recycling methods, AI-driven energy solutions, and increased use of green data centers and cloud technologies. These innovations aim to make technology more sustainable.

E. **Assertion-Reason Questions:**
   1. (a) Both A and R are true, and R is the correct explanation of A.
   2. (d) A is false, but R is true.

F. **Case-Based Question:**
   1. It reduces the need for paper, saving trees and lowering environmental impact from printing.
   2. Solar energy is renewable and clean, reducing dependence on fossil fuels and cutting electricity costs.
   3. It prevents harmful materials from polluting the environment and conserves resources by reusing components.
   4. The school can encourage students and staff to turn off devices when not in use to save energy.

Art Integration

Do yourself

Worksheet-1

A. **Click (✓) the correct option:**
   1. (b) Star Topology
   2. (c) Virus
   3. (a) *
   4. (c) parseInt("25")
   5. (b) my_turtle.circle(50, 180)

B. **Fill in the blanks:**
   1. switch   2. moral
   3. class   4. const
   5. speed

C. **True or False:**
   1. False   2. True
   3. False   4. False
   5. True

D. **Answer the following questions:**
   1. Protocols are a set of rules that determine how data is transmitted over the network and ensure that devices can communicate effectively.
   2. Cyberbullying is the use of technology to harass, intimidate, or harm others. It can occur through social media, messaging apps, or online games and may lead to anxiety, depression, and even suicidal thoughts.
   3. CSS selectors are used to select and style HTML elements based on their attributes, id, class, or type.
   4. Variables in JavaScript store data that can be used and manipulated throughout the program.
   5. • If you want to clear all drawings from the screen without closing the Turtle graphics window, you can use the clear() method.
      • To reset the turtle's position and clear the screen

completely, use the reset() method.

E. Assertion-Reason Questions:

1. (a) Both assertion and reason are true, and the reason is the correct explanation for the assertion.

2. (d) The assertion is false, but the reason is true.

3. (d) The assertion is false, but the reason is true.

4. (b) Both assertion and reason are true, but the reason is not the correct explanation for the assertion.

5. (a) Both assertion and reason are true, and the reason is the correct explanation for the assertion.

Worksheet-2

A. Click (✓) the correct option:

1. (c) Quantum Internet
2. (b) Narrow AI
3. (c) Industrial robots
4. (c) Limited application
5. (c) Fossil fuels

B. Fill in the blanks:

1. Artificial Intelligence
2. Narrow
3. Service
4. Turing
5. electricity

C. True or False:

1. False
2. False
3. False
4. False
5. False

D. Answer the following questions:

1. This is all possible with the Internet of Things (IoT), where everyday objects are connected to the internet, making life easier and smarter.

2. Artificial Intelligence (AI) is a branch of computer science that focuses on creating systems capable of performing tasks that typically require human intelligence.

3. Sensors help robots perceive their environment, such as measuring distance, detecting heat, and capturing images or videos.

4. Safety Concerns, High Costs, Complexity of Programming, Ethical Issues.

5. Green computing refers to the environmentally responsible use of computers and related resources. It includes designing, using, and disposing of hardware and software in ways that reduce their impact on the environment.

E. Assertion-Reason Questions:

1. (a) Both assertion and reason are true, and the reason is the correct explanation for the assertion.

2. (d) The assertion is false, but the reason is true.

3. (a) Both assertion and reason are true, and the reason is the correct explanation for the assertion.

4. (d) The assertion is false, but the reason is true.

5. (a) Both assertion and reason are true, and the reason is the correct explanation for the assertion.

❏❏