SECTION A

1. (a) (i) HOW TO INSERT A VIDEO INTO A POWERPOINT PRESENTATION [6 marks]

- Open the slide where you want the video.
- Click the **Insert** tab on the ribbon.
- In the **Media** group, click **Video**.
- Choose "This Device", browse to the video file, select it and click **Insert**.
- Resize and move the video object on the slide as needed.
- Set playback options (Select the video Playback tab).
- Choose Start On Click or Automatically, set Play Full Screen or Loop if needed.

(ii) STEPS TO ANIMATE THE PRESENTATION SLIDES [5 marks]

- Open the PowerPoint presentation and select the slide or object to animate.
- Click on the "**Animations**" tab in the top menu.
- In the "Animation" group, choose an animation effect (e.g., Fade, Fly In).
- Adjust the timing in "Start" (e.g., On Click), "Duration" and "Delay".
- Preview by clicking "Preview" or play the slideshow to test.

(iii) BENEFITS AN AUDIENCE ENJOYS FROM MULTIMEDIA PRESENTATIONS [3 marks]

- Videos, images, and sounds keep the audience interested and prevent boredom.
- Visuals and audio help explain complex ideas simply.
- People remember more when they see and hear information together.
- Visuals and videos make complex ideas easier to grasp.
- Combining images, sound and text helps the audience remember information longer.

(b) (i) IDENTIFY DEVICES [2 marks]

I: Smartwatch
II: Blood pressure monitor
III: Smart Jewellery
IV: Fitness Tracker

(ii) BENEFITS OF WEARING DEVICES [4 marks]

I (Smartwatch): Measuring physical activity, displaying notifications, sending/receiving messages, setting alarms.
II (BP Monitor): Checking blood pressure at home.
III (Smart Jewellery): Monitors physical activity and gathers smartphone data.
IV (Fitness Tracker): Measures physical activity metrics like heart rate, sleep patterns, steps taken, calories burnt.

(iii) DIFFERENCES BETWEEN SMARTWATCHES (I) AND FITNESS TRACKERS (IV) [2 marks]

- **Purpose:** Smartwatches are for communication and fitness; trackers focus mainly on health/activity.
- **Display:** Smartwatches have larger/color screens; trackers have smaller/simpler displays.
- **App Support:** Smartwatches run third-party apps; trackers usually don't.
- **Notifications:** Smartwatches show full texts/emails; trackers show basic alerts.
- **Battery Life:** Trackers last longer (week+); smartwatches need frequent charging (1-2 days).
- **Price:** Smartwatches are generally more expensive.

(iv) CHALLENGES OF USING DEVICES [2 marks]

- Personal health data could be exposed/hacked.
- Frequent charging required.
- Data readings may be inaccurate.
- Privacy concerns (tracking location).
- Can be expensive to buy/repair.

SECTION B

2. (a) WHY GOOGLE SYCAMORE IS SUPERIOR [3 marks]

It is a quantum computer that performs certain tasks much faster than traditional supercomputers by using qubits (superposition and entanglement). It solved a complex problem in 200 seconds that would take a supercomputer 10,000 years.

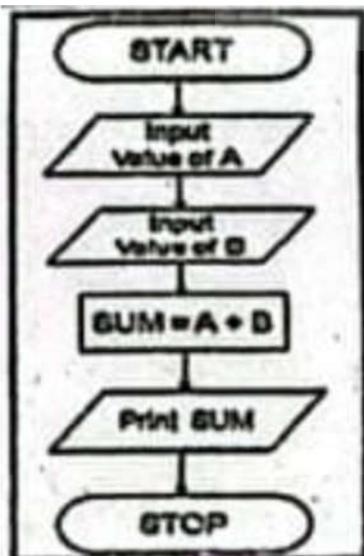**(b) FEATURES OF NEXT GENERATION COMPUTERS [2 marks]**

- IoT & wearable integration.
- Quantum processing.
- Hybrid classical-quantum CPUs.
- Advanced AI Integration.
- Neuromorphic Chips.
- Natural Language Processing.

(c) ALGORITHM TRANSLATION [4 marks]

- **Pseudocode:**
- Begin
-   Input A
-   Input B
-   Compute SUM = A + B
-   Print SUM
- End
- **Flowchart:**

(d) BENEFITS OF ALGORITHMS [3 marks]

- Break problems into clear, step-by-step instructions.
- Optimize time and resource usage.
- Follow precise logic, minimizing human error.
- Can be reused across similar problems.
- Enable machines to solve problems autonomously (AI foundation).

3. (a) (i) CASHLESS TRANSACTION EXPLANATION [2 marks]

Paying for goods or services online without using physical money, using digital methods like credit cards, mobile wallets, or bank transfers.

(ii) IDENTIFICATION [2 marks]

I: Bank Card/MasterCard/Visa
II: QR code
III: Cryptocurrency/Bitcoin wallet
IV: Mobile Money Wallet

(b) DISADVANTAGES OF E-COMMERCE [2 marks]

- Security risks.
- Limits physical interaction (cannot touch/feel product).
- Delivery delays.
- Requires technology access.
- Return rates can be higher.

(c) (i) IDE DEFINITION [2 marks]

Software that provides programmers with tools to write, edit, compile, debug, and run code all in one application.

(ii) IDE TOOLS [2 marks]

- **Code Editor:** Type and edit code with syntax highlighting.
- **Debugger:** Finds and fixes errors by stepping through code.
- **Compiler/Interpreter:** Translates code into machine language.
- **Build/Run buttons:** Compile and run the program.

(d) (i) PLUG-AND-PLAY DEVICES [1 mark]

USB flash drive, USB keyboard, USB mouse, External hard drives.

(ii) PERCEPTUAL COMPUTING DEVICES [1 mark]

Microsoft Kinect, Face ID, Google Nest Hub, VR Headsets, Facial recognition camera.

4. (a) DEVICE DRIVERS [2 marks]

- Software that allows the operating system to communicate with hardware devices like printers or keyboards. They act as translators.

(b) UPDATING DRIVERS SEQUENCE [5 marks]

1. IV. Right-click on the Start menu and select "Device Manager."
2. III. Expand the category of the device you want to update.
3. V. Right-click on the specific device and choose "Update driver."
4. I. Select "Search automatically for updated driver software."
5. II. Follow the prompts to complete the update.

(c) STORAGE SYSTEM FEATURES [3 marks]

(i) Network Storage: Physical storage connected to a local network; multiple users access files.

(ii) Cloud Storage: Online storage on remote servers accessed via internet; accessible anywhere.

(iii) Holographic Storage: Stores massive data using light patterns in 3D space; reads/writes in parallel.

(d) PERCEPTUAL COMPUTING IN EDUCATION [2 marks]
- Engaging with digital content through gestures/voice.
- Manipulating virtual objects in 3D.
- Supporting students with disabilities (eye tracking).
- Speech recognition for language learning.

5. (a) E-LEARNING PLATFORMS [2 marks]
Google Classroom, Coursera, Khan Academy, Udemy, Zoom, Microsoft Teams.

(b) WORD TOOLS [3 marks]
(i) SmartArt: Creates diagrams/visual representations (flowcharts, hierarchies).
(ii) Charts: Presents numerical data visually (bar charts, pie charts).
(iii) Hyperlinks: Links text/objects to web pages or other file locations.

(c) (i) SCREEN CLIPPING [2 marks]
A tool that allows you to capture and insert a specific portion of your screen directly into your document.

(ii) INSERT SCREENSHOT SEQUENCE [3 marks]
1. I. Go to the page where you want to insert the screenshot.
2. IV. Click on the "Insert" tab in the top menu.
3. V. Locate the "Screenshot" option in the "Illustrations" group.
4. VI. Choose "Screen Clipping" at the bottom of the drop-down menu.
5. II. Your screen will temporarily fade... transparent crosshair cursor.
6. III. Click and drag to select the specific area...
7. VII. Release the mouse button to insert...

(d) PERSONALIZING LAPTOP [2 marks]
- Changing desktop background.
- Changing lock screen.
- Adjusting display settings.
- Installing favorite apps.
- Setting up user accounts/passwords.
- Customizing mouse pointer.