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CLASS X · EMPLOYABILITY SKILLS · PART A OF EVERY SKILL SUBJECT (405 · 413 · 417 · 418) · CBSE BOARD EXAMINATION 2027

PART A · UNIT 3

# ICT Skills – II

OS · Files Folders Antivirus

Unit Booklet · Short Notes · Board-Pattern Questions · Model Answers

Part A · 2 of 10 theory marks | 26 questions with model answers | For 405 · 413 · 417 · 418 | Taught: Sat 12 Dec

## INSIDE THIS BOOKLET


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## STUDENT DETAILS

NAME _____

CLASS & SECTION _____

ROLL NO. _____

UNIT FINISHED ON _____

OBJECTIVE SELF-CHECK _____ / 15

1

READ THIS FIRST · SHORT NOTES

# Unit Notes

What an operating system does and its classes, the desktop, icons and taskbar, files, folders and file operations, how files are organised, and how to care for a computer and protect it from viruses.

## THIS UNIT IN THE BOARD PAPER

**2** / 10

Each Part A unit carries about **2 marks**: usually one **1-mark** item in Q1 and one **2-mark** question in Q6–Q10. From this unit, operating systems, file and folder operations, and computer care and virus protection are asked most often.

## SYLLABUS 2026–27 · WHAT CBSE LISTS FOR THIS UNIT

- Classes of operating systems
- Desktop, menus, icons and taskbar
- File concepts, file operations, file organisation, directory and file-system structures; creating and managing files and folders
- Care and maintenance of a computer: cleaning, maintenance schedule
- Protecting against viruses; scanning; removing spam and temporary files

## HOW PART A (EMPLOYABILITY SKILLS) IS SET IN THE BOARD PAPER

**1 mark**
Q1: six objective items from all five units – answer any **4 of 6**.

**2 marks**
Q6–Q10: one short question from each unit – answer any **3 of 5** in **20–30 words**.

**4 marks**
Not asked from Part A. The long and case questions here are for school tests and deeper understanding.

**Part A = 10**
Objective 4 + short 6. It is the same for every skill subject (405, 413, 417, 418).

Part A marks are easy to score: learn the key words, lists and definitions exactly.

## PRACTICAL WORK FOR THIS UNIT

Identify the taskbar, icons and menus · create, rename, move and delete files and folders · save files in sub-folders · restore files from the Recycle Bin · clean a keyboard and screen safely · run a virus scan and Disk Cleanup.

## 1 Operating system

**Operating system (OS):** system software that manages the computer's hardware and software and lets the user work with the computer. It works between the **user** and the **hardware**.

- **Functions:** starts the computer, runs programs, manages memory, files and devices (printer, keyboard), gives the user interface and provides security (passwords).
- **Examples:** Windows, macOS, Linux (Ubuntu), Android, iOS.

## 2 Classes of operating systems

| Class | Meaning | Examples |
|---|---|---|
| **Command line (CLI)** | User **types commands** | MS-DOS, Linux terminal |
| **Graphical (GUI)** | User clicks **icons, windows and menus** | Windows, macOS, Ubuntu |
| **Single-user, single-task** | One user, one program at a time | MS-DOS |
| **Single-user, multi-tasking** | One user, many programs together | Windows, macOS |
| **Multi-user** | Many users share one computer's resources | Linux and Unix servers |
| **Mobile** | For phones and tablets; touch screen | Android, iOS |
| **Real-time** | Responds at once to inputs | Machines in factories, traffic-light and medical systems |

## 3 Desktop, icons and taskbar

- **Desktop:** the main screen seen after the computer starts; it shows the wallpaper and icons.
- **Icons:** small pictures that stand for programs, files and folders (This PC, Recycle Bin).
- **Taskbar:** the strip at the bottom with the **Start** button, pinned and open programs and the notification area (clock, battery, network).
- **Start menu:** lists programs, settings and power options (shut down, restart).

## 4 Files and folders

- **File:** a named collection of related data stored on a disk – a letter, a photo, a song.
- A file name has a **name** and an **extension**: in *report.docx*, 'report' is the name and '.docx' shows the type.
- **Folder (directory):** a container that keeps related files and other folders (**sub-folders**).

| Extension | File type |
|---|---|
| **.docx** | Word document |
| **.xlsx** | Spreadsheet |
| **.pptx** | Presentation |
| **.txt** | Plain text |
| **.jpg, .png** | Picture |
| **.mp3** | Audio |
| **.mp4** | Video |
| **.pdf** | PDF document |

## 5 File operations

| Operation | How (Windows) |
|---|---|
| **Create a folder** | Right-click empty space → New → Folder → type name → Enter |
| **Rename** | Select → F2 (or right-click → Rename) |
| **Copy / Cut / Paste** | Ctrl + C / Ctrl + X / Ctrl + V |
| **Undo** | Ctrl + Z |
| **Save** | Ctrl + S |
| **Delete** | Delete key – goes to the **Recycle Bin** |
| **Delete permanently** | Shift + Delete – skips the Recycle Bin |
| **Restore** | Open Recycle Bin → right-click file → Restore (returns to its old place) |

## 6 File organisation and directory structure

- Files are kept in a **tree (hierarchical) structure**: drive (root) → folders → sub-folders → files.
- **Path** shows where a file is: *C:\School\Class10\Science\notes.docx*.
- **File system:** the method an OS uses to store and find files on a drive, e.g. NTFS or FAT32 (Windows), ext4 (Linux).
- Good habits: meaningful names, one folder per subject, a clean desktop, regular backup.

## 7 Care and maintenance of a computer

- **Why:** longer life, smooth and fast working, no data loss, fewer costly repairs.
- **Cleaning:** switch off first; dust the keyboard with a soft brush or blower; wipe the screen with a soft, lint-free cloth (never spray water on it); keep food and drinks away; keep vents free of dust.

| When | Maintenance task |
|---|---|
| **Daily** | Shut down properly; keep the desk clean and dry |
| **Weekly** | Clean keyboard and screen; scan for viruses; delete temporary files |
| **Monthly** | Update the OS and antivirus; back up important data |
| **Yearly** | Get the inside cleaned and checked by a technician |

## 8 Protecting against viruses; spam and temporary files

> **Virus:** a harmful program that copies itself, damages or deletes files and slows the computer. It spreads through infected pen drives, e-mail attachments, unsafe downloads and websites.

- **Protect:** install antivirus and keep it updated; scan pen drives before opening; do not open unknown attachments or links; download only from trusted sites; keep the OS updated; back up data.
- **Scanning:** run a full antivirus scan; quarantine or delete infected files.
- **Spam:** unwanted bulk e-mail – do not open it; delete it and empty the spam folder.
- **Temporary files:** made by programs and browsers; they waste space. Remove them with **Disk Cleanup** and empty the Recycle Bin.

## Key terms

15 terms

- **Operating system:** manages hardware and software
- **CLI:** type commands
- **GUI:** icons, windows, menus
- **Desktop:** main screen after start-up
- **Icon:** small picture for a program or file
- **Taskbar:** strip with Start and open programs
- **File:** named collection of data
- **Extension:** shows file type, e.g. .pdf
- **Folder:** container for files
- **Path:** address of a file
- **Recycle Bin:** holds deleted files until emptied
- **Virus:** harmful self-copying program
- **Antivirus:** finds and removes viruses
- **Spam:** unwanted bulk e-mail
- **Temporary files:** short-term files that waste space

## Common mistakes and exam tips

### AVOID THESE

- Delete → Recycle Bin (can restore). **Shift + Delete** → gone for good.
- Ctrl + C copy, Ctrl + X cut, Ctrl + V paste, Ctrl + Z undo, F2 rename.
- Android and iOS are **mobile** OS with a touch GUI, not CLI.
- Never spray water directly on the screen; switch off before cleaning.

# A

PART A · 1 MARK EACH

## Objective Questions

15 questions: MCQs, assertion–reason, fill in the blanks and true/false, like Q1 of the board paper. Answers in Part E.

### ASSERTION–REASON: HOW TO ANSWER

**(a)** Both A and R are true, and R is the correct explanation of A.
**(b)** Both A and R are true, but R is not the correct explanation of A.
**(c)** A is true, but R is false.
**(d)** A is false, but R is true.

**A1.** Which of these is an operating system? [1]

**(a)** MS Word **(b)** Windows
**(c)** Google Chrome **(d)** Paint

**A2.** An operating system in which the user types commands is a: [1]

**(a)** GUI **(b)** CLI
**(c)** mobile OS **(d)** spreadsheet

**A3.** The strip at the bottom of the Windows screen with the Start button is the: [1]

**(a)** Desktop **(b)** Taskbar
**(c)** Title bar **(d)** Recycle Bin

**A4.** The extension of a PowerPoint presentation is: [1]

**(a)** .docx **(b)** .xlsx **(c)** .pptx **(d)** .txt

**A5.** The keyboard shortcut to paste is: [1]

**(a)** Ctrl + C **(b)** Ctrl + X **(c)** Ctrl + V **(d)** Ctrl + Z

**A6.** A deleted file can usually be brought back from the: [1]

**(a)** Taskbar **(b)** Recycle Bin
**(c)** Start menu **(d)** Desktop wallpaper

**A7.** Which keys delete a file permanently, without sending it to the Recycle Bin? [1]

**(a)** Shift + Delete **(b)** Ctrl + S
**(c)** Alt + Tab **(d)** F2

**A8.** The best way to clean a computer screen is with: [1]

**(a)** a wet newspaper **(b)** a soft lint-free cloth
**(c)** water sprayed directly **(d)** a rough towel

**A9.** Viruses most often enter a computer through: [1]

**(a)** unknown e-mail attachments **(b)** switching off the monitor
**(c)** cleaning the keyboard **(d)** using a mouse pad

**A10.** ASSERTION–REASON [1]

**Assertion (A):** Antivirus software should be updated regularly.

**Reason (R):** New viruses appear every day.

(a) Both A and R are true, and R is the correct explanation of A.
(b) Both A and R are true, but R is not the correct explanation of A.
(c) A is true, but R is false.
(d) A is false, but R is true.

**A11.** ASSERTION–REASON [1]

**Assertion (A):** Files in the Recycle Bin are lost forever.

**Reason (R):** The Recycle Bin keeps deleted files until it is emptied.

(a) Both A and R are true, and R is the correct explanation of A.
(b) Both A and R are true, but R is not the correct explanation of A.
(c) A is true, but R is false.
(d) A is false, but R is true.

**A12.** FILL IN THE BLANK [1]

A container used to keep related files together is called a _____.

**A13.** FILL IN THE BLANK [1]

In *C:\School\Science\notes.docx*, the file extension is _____.

**A14.** TRUE OR FALSE [1]

Temporary files take up disk space and can be removed with Disk Cleanup.

**A15.** TRUE OR FALSE [1]

Android is a command line operating system.

## B — Short Answer Questions

PART B · 2 MARKS EACH

Answer in 20–30 words: two clear points, like Q6–Q10 of the board paper. Model answers in Part E.

**B1.** What is an operating system? Give two examples. MUST DO [2]

**B2.** Differentiate between CLI and GUI operating systems. MUST DO [2]

**B3.** Differentiate between a file and a folder. [2]

**B4.** Write the steps to restore a deleted file. [2]

**B5.** Give any two ways to protect a computer from viruses. [2]

**B6.** Why is regular care and maintenance of a computer needed? [2]

## C — Long Answer Questions

PART C · 4 MARKS EACH

Part A has no 4-mark questions in the board paper. These are for school tests and to learn the unit fully. Model answers in Part E.

**C1.** Explain any four file operations. [4]

**C2.** Prepare a maintenance schedule for a school computer lab. MUST DO [4]

**C3.** Explain the desktop, icons, taskbar and Start menu. [4]

PART D · CASE AND COMPETENCY BASED

# D Case-Based Questions

Read the situation, then answer from it and from the unit. For school tests and to practise applying the unit.

## D1. Case-Based · The slow lab computer [4]

A lab computer has become very slow and strange pop-ups keep appearing. Students often bring pen drives from a cyber café and open them without scanning. The desktop is full of files named 'New Document (7)' and 'Untitled 12'.

(i) What is the most likely cause of the pop-ups and slowness? [1]

(ii) Suggest two steps to clean the computer. [2]

(iii) How should the files on the desktop be organised? [1]

## D2. Competency-Based · Finding the project file [4]

Neha's project is saved at **D:\Students\Class10\Rose\AI\project.pptx**. While tidying up, she selected it and pressed the Delete key by mistake.

(i) Name the drive, and the folder that directly holds the file. [1]

(ii) What type of file is it? [1]

(iii) Can she get the file back? How? [2]

E

PART E · ANSWERS IN CBSE MARKING-SCHEME STYLE

# Answers

Objective key with a reason, then model answers: numbered value points, key word first, the mark for each point in orange, and the word count under each answer. Any other correct, relevant point also earns the mark.

## Objective questions – answer key

Part A

Write the option letter **and** the answer, as the marking scheme does.

| Q | Answer | Why (one line) |
|---|---|---|
| A1 | **(b) Windows** | The others are application software. |
| A2 | **(b) CLI** | Command line interface. |
| A3 | **(b) Taskbar** | It shows open programs too. |
| A4 | **(c) .pptx** | p for presentation. |
| A5 | **(c) Ctrl + V** | C copies, X cuts. |
| A6 | **(b) Recycle Bin** | Until the bin is emptied. |
| A7 | **(a) Shift + Delete** | It skips the bin. |
| A8 | **(b) a soft lint-free cloth** | It does not scratch or wet the screen. |
| A9 | **(a) unknown e-mail attachments** | Also infected pen drives. |
| A10 | **(a) Both true; R explains A** | R explains A. |
| A11 | **(d) A false, R true** | A is false – they can be restored; R is true. |
| A12 | **folder (directory)** | It can hold sub-folders too. |
| A13 | **.docx** | It shows a Word document. |
| A14 | **True** | It frees space safely. |
| A15 | **False** | Correct: Android is a mobile OS with a touch-based GUI; users tap icons. |

## Short answers

Part B · 2 marks

**B1.** What is an operating system? Give two examples. [2]

1. **Meaning:** system software that manages hardware and software and lets the user use the computer. 1
2. **Examples:** Windows and Linux (Ubuntu). 1

20 words · CBSE asks 20–30 words | Marking: 1 + 1 = 2 | 1 + 1 | MUST DO

**B2.** Differentiate between CLI and GUI operating systems. [2]

1. **CLI:** the user types commands, e.g. MS-DOS. 1
2. **GUI:** the user clicks icons and menus, e.g. Windows. 1

16 words · CBSE asks 20–30 words | Marking: 1 + 1 = 2 | 1 + 1 | MUST DO

**B3.** Differentiate between a file and a folder. [2]

1. **File:** a named collection of related data, e.g. notes.docx. 1
2. **Folder:** a container that holds files and sub-folders. 1

17 words · CBSE asks 20–30 words | Marking: 1 + 1 = 2 | 1 + 1

**B4.** Write the steps to restore a deleted file. [2]

1. **Open:** double-click the Recycle Bin and find the file. 1
2. **Restore:** right-click it and choose Restore; it returns to its old place. 1

21 words · CBSE asks 20–30 words | Marking: 1 + 1 = 2 | 1 + 1

**B5.** Give any two ways to protect a computer from viruses. [2]

1. **Antivirus:** install it, keep it updated and scan regularly. 1
2. **Safe use:** do not open unknown attachments; scan pen drives first. 1

20 words · CBSE asks 20–30 words | Marking: 1 + 1 = 2 | 1 + 1

**B6.** Why is regular care and maintenance of a computer needed? [2]

1. **Life and speed:** keeps the computer working smoothly for longer. 1
2. **Safety:** prevents data loss, virus damage and costly repairs. 1

19 words · CBSE asks 20–30 words | Marking: 1 + 1 = 2 | 1 + 1

## Long answers

Part C · 4 marks

**C1.** Explain any four file operations. [4]

1. **Create:** right-click → New → Folder, then name it. 1
2. **Rename:** select and press F2, type the new name. 1
3. **Copy and move:** Ctrl + C or Ctrl + X, then Ctrl + V at the new place. 1
4. **Delete and restore:** Delete sends it to the Recycle Bin; Restore brings it back. 1

50 words · CBSE asks 50–80 words | Marking: 1 + 1 + 1 + 1 = 4 | 1 mark each

**C2.** Prepare a maintenance schedule for a school computer lab. [4]

1. **Daily:** shut down properly; keep desks clean and dry. 1
2. **Weekly:** clean keyboards and screens; virus scan; delete temporary files. 1
3. **Monthly:** update OS and antivirus; back up data. 1
4. **Yearly:** technician cleans and checks the hardware. 1

34 words · CBSE asks 50–80 words | Marking: 1 + 1 + 1 + 1 = 4 | 1 mark each | MUST DO

**C3.** Explain the desktop, icons, taskbar and Start menu. **[4]**

1. **Desktop:** main screen after start-up. 1
2. **Icons:** small pictures for programs, files and folders. 1
3. **Taskbar:** bottom strip with Start, open programs and clock. 1
4. **Start menu:** lists programs, settings and power options. 1

30 words · CBSE asks 50–80 words | Marking: 1 + 1 + 1 + 1 = 4 | 1 mark each

## Case-based answers

Part D

**D1.** Case-Based · The slow lab computer (passage printed in Part D) **[4]**

**(i)** What is the most likely cause of the pop-ups and slowness? [1]

A **virus** (malware) from unscanned pen drives.

**(ii)** Suggest two steps to clean the computer. [2]

(1) Update the antivirus and run a **full scan**; quarantine infected files. (2) Use **Disk Cleanup** to remove temporary files and empty the Recycle Bin.

**(iii)** How should the files on the desktop be organised? [1]

Put them in **folders** by class and subject with meaningful names.

Marking: 1 + 2 + 1 = 4 | 1 + 2 + 1

**D2.** Competency-Based · Finding the project file (passage printed in Part D) **[4]**

**(i)** Name the drive, and the folder that directly holds the file. [1]

Drive **D:**; folder **AI**.

**(ii)** What type of file is it? [1]

A PowerPoint **presentation** (.pptx).

**(iii)** Can she get the file back? How? [2]

**Yes.** Delete sends it to the Recycle Bin: open the bin, right-click the file and choose **Restore**. It could not be restored this way if Shift + Delete was used or the bin was emptied.

Marking: 1 + 1 + 2 = 4 | 1 + 1 + 2