

SMARTWIZ

GRADE10 COMPUTER APPLICATIONS TECHNOLOGY (CAT) EXAM

MARKS: 100

| MARKS | |
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| | |

TIME: 2 hours

SCHOOL _____

CLASS (e.g. 4A) _____

SURNAME _____

NAME _____

Instructions for Learners:

- Read all the instructions carefully before you begin the exam.
- Write your name and learner number clearly on the answer sheet/booklet.
- Answer all the questions unless otherwise instructed.
- Show all your work/calculations where applicable.
- Write neatly and legibly.
- Use only blue or black ink. *Do not use correction fluid or tape.*
- No electronic devices (calculators, phones, etc.) are allowed unless explicitly permitted.
- Raise your hand if you have any questions.
- Do not talk to other learners during the exam.
- Any form of cheating will lead to disqualification.

This test consists of 6 pages including the cover page.

SECTION A: COMPUTER HARDWARE AND SOFTWARE (25 marks)

- 1. Define the following hardware components and explain their role:
 - a) Power Supply Unit (PSU) (3 marks)

- b) RAM (Random Access Memory) (3 marks)

- c) Motherboard (3 marks)

- 2. Compare and contrast input devices and output devices. Give two examples of each. (6 marks)

- 3. Explain the purpose of an operating system. List two functions it performs. (5 marks)

- 4. What is an IP address? Why is it necessary in networking? (5 marks)

SECTION B: FILE MANAGEMENT AND DATA ORGANISATION (20 marks)

1. Differentiate between the following:

a) Backup and Restore (4 marks)

b) File extension and file format (4 marks)

2. What is metadata? Give two examples of metadata in a digital photo file. (4 marks)

3. Describe the process and benefits of organizing files into folders. (4 marks)

4. What is the difference between a bit and a byte? How many bits are in one byte? (4 marks)

SECTION C: OFFICE APPLICATIONS (25 marks)

1. In spreadsheet software:

a) Explain what a function is and give an example of the SUM function. (4 marks)

b) Describe the use of the IF function in decision making. Provide a simple example formula. (5 marks)

2. In word processing:

a) How do you insert a header and footer in a document? (4 marks)

b) Explain the difference between 'Save' and 'Save As'. (3 marks)

3. In presentation software:

a) What is the purpose of using slide masters? (3 marks)

b) List three common presentation file formats. (3 marks)

SECTION D: DATABASES AND NETWORKING (20 marks)

1. What is a primary key in a database table? Why is it important? (4 marks)

2. Describe the role of a router in a network. (4 marks)

3. Explain the difference between wireless and wired networks. Give one advantage of each. (6 marks)

4. What is the function of a URL? Break down the parts of a typical URL. (6 marks)

SECTION E: INTERNET SAFETY AND ETHICS (10 marks)

1. What is malware? Name three types of malware and explain one briefly. (5 marks)

2. Explain the term 'digital footprint'. How can one manage their digital footprint responsibly? (3 marks)

3. List two ways to protect personal information online. (2 marks)

End of Exam
TOTAL: 100 marks

MEMO

SECTION A: COMPUTER HARDWARE AND SOFTWARE (25 marks)

1. Define and explain:

a) Power Supply Unit (PSU)

- Converts AC electricity from the mains into DC power for the computer components. (3 marks)

b) RAM (Random Access Memory)

- Temporary memory that stores data and instructions for the CPU while the computer is on; fast read/write. (3 marks)

c) Motherboard

- Main circuit board connecting all components; allows communication between CPU, RAM, and peripherals. (3 marks)

2. Input vs Output devices:

- Input devices: Hardware used to enter data into a computer (e.g., keyboard, mouse). (2 marks)
- Output devices: Hardware used to present data from a computer (e.g., monitor, printer). (2 marks)
- Two examples of each (2 marks)

3. Purpose of Operating System:

- Manages hardware resources, provides user interface, manages files and applications. (3 marks)
- Two functions: File management, task scheduling, managing peripherals, user interface. (2 marks)

4. IP Address:

- A unique numerical label assigned to each device on a network to identify it. (3 marks)
- Necessary for routing data to the correct device in networks/internet. (2 marks)

SECTION B: FILE MANAGEMENT AND DATA ORGANISATION (20 marks)

1. Differences:

a) Backup: Making a copy of data for safekeeping. Restore: Retrieving data from backup after loss. (4 marks)

b) File extension: Suffix indicating file type (.docx, .jpg). File format: Structure of how data is stored (e.g., JPEG format). (4 marks)

2. Metadata:

- Data about data (3 marks)
- Examples: Date photo was taken, camera settings, location info. (1 mark)

3. Organizing files into folders:

- Helps keep files organized and easy to find. (2 marks)
- Benefits: Improves efficiency, reduces clutter, easier backup and sharing. (2 marks)

4. Bit vs Byte:

- Bit: smallest unit of data, can be 0 or 1. (2 marks)
- Byte: group of 8 bits. (2 marks)

SECTION C: OFFICE APPLICATIONS (25 marks)

1. Spreadsheet:

- a) Function: Predefined formula to perform calculations. Example: `=SUM(A1:A5)` adds values in A1 to A5. (4 marks)
- b) IF function: Performs logic test; returns value if true or false. Example: `=IF(B2>50, "Pass", "Fail")`. (5 marks)

2. Word processing:

- a) Insert header/footer: Go to Insert tab → Header/Footer → Choose style. (4 marks)
- b) Save vs Save As: Save updates current file; Save As creates a new file or saves in a new location/name. (3 marks)

3. Presentation:

- a) Slide master: Template to control look of all slides consistently. (3 marks)
- b) File formats: PPTX, PDF, ODP (any 3 valid formats). (3 marks)

SECTION D: DATABASES AND NETWORKING (20 marks)

1. Primary key:

- Unique identifier for each record in a table. (3 marks)
- Ensures each record is unique and can be referenced. (1 mark)

2. Router:

- Device that forwards data packets between networks; connects LAN to the internet. (4 marks)

3. Wireless vs Wired networks:

- Wireless: Uses radio waves; advantage—mobility/flexibility. (3 marks)
- Wired: Uses cables; advantage—faster and more reliable connection. (3 marks)

4. URL function and parts:

- URL: Web address to locate a resource on the internet. (2 marks)

- Parts: Protocol (e.g., http://), domain name (e.g., www.example.com), path (e.g., /page1.html). (4 marks)
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SECTION E: INTERNET SAFETY AND ETHICS (10 marks)

1. Malware and types:

- Malware: Malicious software designed to harm or exploit systems. (2 marks)
- Types: Virus, Trojan horse, ransomware, spyware, worms. (3 marks)
- Explanation (1 example briefly): Virus attaches to files and spreads. (1 mark)

2. Digital footprint:

- Record of one's online activity. (2 marks)
- Manage by: Limiting personal info shared, reviewing privacy settings. (1 mark)

3. Protecting personal info online:

- Use strong passwords. (1 mark)
- Avoid sharing sensitive info on public platforms. (1 mark)

End of Marking Memorandum

TOTAL : 100