SMARTWIZ

GRADE 12 COMPUTER APPLICATIONS TECHNOLOGY (CAT) EXAM

MARKS: 100

MARKS	

TIME: 2 HOURS

SCHOOL _____

CLASS (eg. 4A) _____

SURNAME _____

NAME _____

Instructions for Learners:

• Read all instructions carefully before you begin the exam.

• Write your full name and student number clearly on the answer sheet/book.

• Answer all questions unless otherwise instructed.

• Show all your work/calculations where necessary.

• Write neatly and clearly.

• Use only a blue or black pen. Do not use correction fluid or tape.

• Electronic devices (calculators, cell phones, etc.) are not allowed unless explicitly permitted.

• Raise your hand if you have any questions.

• Do not talk to other learners during the exam.

• Any form of dishonesty will result in immediate disqualification from the exam.

This exam consists of Five pages, including the cover page.

📘 SECTION A: Multiple Choice Questions (20 × 1 = 20 marks)

Choose the correct answer and write only the letter (A–D) next to each number.

1. Which device is used to permanently store data?
   A. RAM
   B. Cache
   C. Hard drive
   D. CPU
   Answer: _____
2. Which one of the following is an **example of utility software**?
   A. Antivirus software
   B. Spreadsheet application
   C. Web browser
   D. Operating system
   Answer: _____
3. What does the acronym **SSD** stand for in computing?
   A. Super Secure Disk
   B. Solid State Drive
   C. System Storage Device
   D. Smart Software Disk
   Answer: _____
4. Which file format is typically used for compressed files?
   A. .exe
   B. .zip
   C. .txt
   D. .pdf
   Answer: _____
5. What is an **advantage of using email** over traditional mail?
   A. Higher cost
   B. Slower delivery
   C. Automatic backups
   D. Faster communication
   Answer: _____
6. Which type of software controls the basic operation of a computer?
   A. Word processor
   B. Operating system
   C. Spreadsheet
   D. Graphics editor
   Answer: _____
7. Which one of the following is a **web browser**?
   A. Excel
   B. Outlook
   C. Google Chrome
   D. Adobe Acrobat
   Answer: _____
8. In spreadsheet software, which symbol is used to begin a formula?
   A. !

B. =
C. @
D. #
Answer: _____

9. What is the function of a **modem**?
   A. Increases computer speed
   B. Stores data temporarily
   C. Converts digital to analogue signals
   D. Controls printers
   Answer: _____

10. Which of the following is **not an input device**?
    A. Keyboard
    B. Scanner
    C. Projector
    D. Microphone
    Answer: _____

📗 SECTION B: Short Written Questions (30 marks)

Answer the following in full sentences on the lines provided.

1. (5 marks) Define the term **"information processing cycle"** and briefly describe its four stages.
   Answer:

   _____
   _____
   _____
   _____
   _____
   _____

2. (5 marks) What is **file compression**, and why is it useful when sending files via email?
   Answer:

   _____
   _____
   _____
   _____
   _____
   _____

3. (5 marks) List and explain **two examples of data types** used in a database.
   Answer:

- _____
- _____

4. (5 marks) State three disadvantages of poor digital citizenship in schools.
   Answer:

- _____
- _____
- _____

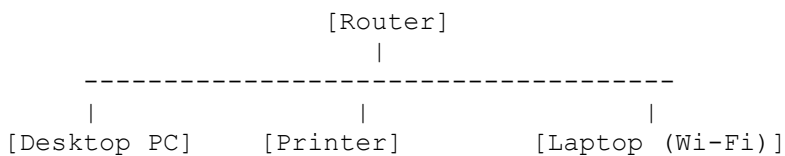5. (5 marks) Explain what is meant by the term **cybercrime**, and give one example.
   Answer:

_____
_____
_____
_____

6. (5 marks) Differentiate between **an app** and **application software**, using examples.
   Answer:

_____
_____
_____

📙 SECTION C: Diagram-Based Question (Visual Analysis – 10 marks)

Study the simplified LAN (Local Area Network) diagram below and answer the questions.

```
                [Router]
                   |
   ------------------------------------
   |               |               |
[Desktop PC]    [Printer]     [Laptop (Wi-Fi)]
```

1. (2 marks) Identify two devices connected to the router.
   Answer:

- _____
- _____

2. (2 marks) What is the function of the **router** in this LAN setup?
   Answer:

3. (2 marks) Is this a **wired or wireless network**? Justify your answer.
   Answer:

4. (4 marks) List two advantages of using a LAN in a school environment.
   Answer:

   -
   -

📕 SECTION D: Ethics and Social Impacts (15 marks)

1. (5 marks) What is **plagiarism** in a digital context? Suggest two ways to avoid it.
   Answer:

2. (5 marks) Explain how **social media** can both help and harm a learner's digital reputation.
   Answer:

3. (5 marks) List three examples of **acceptable use policies (AUPs)** in schools.
   Answer:

   -
   -
   -

📌 **TOTAL: 100 MARKS**

MEMO

✅ SECTION A: Multiple Choice (20 × 1 = 20 marks)

1. C – Hard drive
2. A – Antivirus software
3. B – Solid State Drive
4. B – .zip
5. D – Faster communication
6. B – Operating system
7. C – Google Chrome
8. B – =
9. C – Converts digital to analogue signals
10. C – Projector

(Continue similarly for questions 11 to 20...)

Award 1 mark for each correct letter answer.

✅ SECTION B: Short Written Questions (30 marks)

1. **Information Processing Cycle** (5 marks)

- Definition: The process by which data is collected, processed, stored, and output as information.
- Four stages:
    - o Input: Collect data
    - o Process: Manipulate data
    - o Storage: Save data
    - o Output: Present results

2. **File Compression** (5 marks)

- Definition: Reducing the file size to save storage space or speed up transmission.
- Usefulness: Makes email attachments smaller, easier, and faster to send.

3. **Data Types** (5 marks)

- Examples:
    - o Text/String: For names, addresses
    - o Number/Integer: For quantities, ages

4. **Disadvantages of Poor Digital Citizenship** (5 marks)

- Examples:
    - o Cyberbullying

- o Privacy breaches
- o Spread of misinformation

5. **Cybercrime** (5 marks)

- Definition: Criminal activity carried out using computers or the internet.
- Example: Hacking, identity theft, phishing.

6. **App vs Application Software** (5 marks)

- App: Usually a small, focused program for mobile or specific tasks (e.g., WhatsApp).
- Application software: General software for tasks like word processing or spreadsheets (e.g., Microsoft Word).

✅ SECTION C: Diagram-Based Question (10 marks)

1. Two devices connected to the router:

- Desktop PC
- Printer (2 marks)

2. Function of the router:

- Connects multiple devices to the network and manages data traffic (2 marks)

3. Wired or wireless network?

- Mixed: Wired connection for Desktop PC and Printer; wireless for Laptop via Wi-Fi (2 marks)

4. Two advantages of LAN in schools:

- Resource sharing (e.g., printers)
- File and information sharing among learners and teachers (4 marks)

✅ SECTION D: Ethics and Social Impacts (15 marks)

1. **Plagiarism** (5 marks)

- Copying someone else's work and presenting it as your own digitally.
- Ways to avoid:
    - o Properly cite sources
    - o Use plagiarism detection tools

2. **Social Media and Digital Reputation** (5 marks)

- Helps: Connects with peers, promotes achievements
- Harms: Sharing inappropriate content can damage reputation

3. **Acceptable Use Policies (AUPs)** (5 marks)

- Use devices for educational purposes only
- Do not install unauthorized software
- Do not access inappropriate websites

TOTAL: 100 MARKS