

SMZ

ZANZIBAR EXAMINATION COUNCIL

FORM THREE ENTRANCE EXAMINATION, 2017

063

INFORMATION AND COMPUTER STUDIES

Time: 2:30 Hours.

ANSWER

INSTRUCTIONS TO CANDIDATES

1. This paper consists of Three (3) sections A, B and C.
2. Answer **ALL** questions from Section A and B and **ONLY ONE** questions from section C
3. Write your examination number on each page.
4. Write all answers on the space provided.
5. Use a blue or black pen in writing. Drawings must be in pencil.
6. Cellular phones and unauthorized materials are not allowed in the examination room.

	THIS PART FOR EXAMINER'S ONLY	
Question number	MARKS	SIGNATURE
1.		
2.		
3.		
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11.		
12.		
TOTAL		

SECTION A (15 Marks)

Attempt ALL questions from this section.

1. Choose the correct answer and write its letter in the table provided.

i) Which one of the following is not a common type of computer memory?

- A. RAM
- B. ROM
- C. CPU
- D. Cache

The correct answer is C: CPU.

RAM, ROM, and Cache are types of computer memory, while the CPU is the processor, not a memory type.

ii) A device that translates digital signals into analog signals and vice versa is a:

- A. Router
- B. Switch
- C. Hub
- D. Modem

The correct answer is D: Modem.

A modem converts digital data from a computer into analog signals for transmission and converts incoming analog signals back to digital.

iii) The term cloud computing refers to:

- A. Using a single computer
- B. Storing and accessing data over the internet
- C. Using a computer with no hard disk
- D. A type of network cable

The correct answer is B: Storing and accessing data over the internet.

Cloud computing allows users to access resources, storage, and applications remotely over the internet.

iv) Which of the following is a type of permanent memory?

- A. RAM

- B. ROM
- C. Cache
- D. Register

The correct answer is B: ROM.

ROM (Read-Only Memory) is non-volatile and stores data permanently, unlike RAM which is temporary.

v) The process of putting a computer back into its initial state is called:

- A. Rebooting
- B. Hibernating
- C. Formatting
- D. Installing

The correct answer is C: Formatting.

Formatting erases all data and restores a storage device to its initial state.

vi) A software that is designed to help the user perform a specific task is a:

- A. System software
- B. Operating system
- C. Utility software
- D. Application software

The correct answer is D: Application software.

Application software helps users perform specific tasks like word processing or browsing the internet.

vii) What is a collection of related data stored in a file called?

- A. A database
- B. A record
- C. A field
- D. A table

The correct answer is A: A database.

A database organizes related data for easy management and retrieval.

viii) The term multimedia refers to:

- A. Using a single application

- B. The combination of text, graphics, audio, and video
- C. Running a single program
- D. Using a single computer

The correct answer is B: The combination of text, graphics, audio, and video.

Multimedia integrates different content types for interactive or rich media experiences.

ix) Which of these is a function of the Arithmetic Logic Unit (ALU)?

- A. Storing data
- B. Performing mathematical and logical operations
- C. Controlling the flow of data
- D. Displaying output

The correct answer is B: Performing mathematical and logical operations.

The ALU handles calculations and logical comparisons inside the CPU.

x) A set of instructions given to a computer to perform a specific task is a:

- A. Hardware
- B. Software
- C. Data
- D. Device

The correct answer is B: Software.

Software is a collection of instructions that directs the computer to perform specific tasks.

2. Match the terms in Column A with their descriptions.

- i. Desktop → F: The main screen of a computer when you log in.
- ii. Ergonomics → A: The study of workplace design to maximize comfort and efficiency.
- iii. Malware → D: A program designed to cause harm to a computer.
- iv. Browser → C: A software used to access the internet.
- v. Database → B: A program used to create, store, and manage large amounts of data.

SECTION B (75 Marks)

Attempt ALL questions from this section.

3. a) Distinguish between analog and digital signals.

Analog signals are continuous signals representing data in varying forms, while digital signals are discrete, using binary values (0 and 1).

- b) Give two (2) examples of devices that use each type of signal.

Analog devices: Telephone, Radio

Digital devices: Computer, Digital camera

- c) Why are computers considered digital devices?

Computers process data in binary form, using discrete signals to perform computations.

4. a) Explain what a computer peripheral is.

A computer peripheral is an external device that connects to a computer to expand its functionality.

- b) Give four (4) examples of computer peripherals.

Printer, Scanner, Keyboard, Mouse

- c) What is the main difference between an input peripheral and an output peripheral?

Input peripherals send data to the computer, while output peripherals receive data from the computer.

5. a) Define computer maintenance.

Computer maintenance involves activities aimed at keeping a computer in good working condition.

- b) Mention three (3) reasons why it is important to perform computer maintenance.

To prevent hardware failures, improve performance, and protect data.

- c) What is the purpose of a disk defragmenter?

A disk defragmenter reorganizes fragmented data on a hard disk to improve efficiency and access speed.

6. a) What is a network topology?

Network topology is the layout or arrangement of devices and connections in a computer network.

b) Draw a simple diagram of a Ring topology.

[Ring: devices connected in a circular loop]

c) State one (1) advantage and one (1) disadvantage of a Ring topology.

Advantage: Data travels in a predictable path, reducing collisions.

Disadvantage: Failure of one device can disrupt the entire network.

7. a) Explain the term cybercrime.

Cybercrime refers to illegal activities conducted using computers or the internet.

b) Give two (2) examples of cybercrime.

Hacking, Identity theft

c) Briefly describe the concept of phishing.

Phishing is a technique used to deceive users into revealing sensitive information like passwords or banking details.

8. a) Define the following terms:

i. E-commerce: Buying and selling goods or services online.

ii. E-learning: Learning through electronic means, usually via the internet.

b) State two (2) benefits of e-commerce.

Convenience in shopping, wider market reach

c) What is the main difference between B2B and B2C e-commerce?

B2B (Business-to-Business) involves transactions between businesses, while B2C (Business-to-Consumer) involves businesses selling directly to consumers.

9. a) Explain the difference between Application Software and System Software.

Application software is designed for end-user tasks, while system software manages computer hardware and resources.

b) Give two (2) examples of each.

Application software: Microsoft Word, Adobe Photoshop

System software: Windows OS, Linux

c) What is a user interface?

A user interface is the point of interaction between a user and a computer system.

10. a) Explain the term data security.

Data security is the practice of protecting digital data from unauthorized access, corruption, or theft.

b) Mention three (3) common threats to data security.

Viruses, Hacking, Phishing

c) Briefly describe the purpose of an antivirus program.

An antivirus program detects, prevents, and removes malicious software to protect computer data and system integrity.

SECTION C (10 Marks)

Attempt ONLY ONE (1) question from this section.

11. a) Write a formula to calculate the total marks for each student in column E.

= B2 + C2 + D2

b) What formula would you use in cell F2 to find the average marks for John?

= AVERAGE(B2:D2)

c) Write a formula to find the maximum mark in the Science subject.

= MAX(C2:C6)

d) What formula would you use to find the average mark for the entire class?

= AVERAGE(B2:D6)

12. a) What is a word processor?

A word processor is software used for creating, editing, formatting, and printing text documents.

b) Differentiate between the following terms as used in a word processor:

i. Undo and Redo: Undo reverses the last action, Redo reapplies the action that was undone.

- ii. Copy and Cut: Copy duplicates the selected content, Cut removes it from the original location.
- iii. Font and Font size: Font is the style of text, while font size refers to the height of the characters.

c) Briefly explain the purpose of the Status Bar in a word processor window.

The Status Bar displays information about the document, such as page number, word count, and current mode.