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ZANZIBAR EXAMINATION COUNCIL

FORM THREE ENTRANCE EXAMINATION, 2008

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.		
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11.		
12.		
TOTAL		

SECTION A (15 Marks)

Attempt ALL questions from this section.

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

i) Which one of the following is not a characteristic of a computer?

- A. Accuracy
- B. Versatility
- C. Volatility
- D. Diligence

The correct answer is C: Volatility.

Computers are known for accuracy, versatility, and diligence, but volatility refers to temporary memory that is not a general characteristic of computers.

ii) A device that connects multiple computers in a network is a:

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

The correct answer is C: Hub.

A hub connects multiple computers in a network and sends data to all connected devices. Routers direct traffic between networks, and modems convert signals.

iii) The term cold booting refers to:

- A. Restarting a computer that is already running
- B. Starting a computer from a powered-off state
- C. Shutting down a computer
- D. Installing an operating system

The correct answer is B: Starting a computer from a powered-off state.

Cold booting occurs when a computer is powered on from an off state, unlike warm booting which restarts a running system.

iv) Which of the following is an example of an input device?

- A. Speaker
- B. Monitor
- C. Keyboard
- D. Printer

The correct answer is C: Keyboard.

Input devices allow the user to enter data into the computer, while output devices like speakers and monitors display information.

v) The most popular type of computer used for personal use is the:

- A. Supercomputer
- B. Mainframe
- C. Laptop
- D. Tablet

The correct answer is C: Laptop.

Laptops are widely used for personal computing due to portability and integrated functionality.

vi) A software that helps in managing large amounts of data in an organized way is a:

- A. Word processor
- B. Spreadsheet program
- C. Database management system
- D. Graphics program

The correct answer is C: Database management system.

DBMS allows storage, retrieval, and management of structured data efficiently.

vii) What is a collection of web pages and related content that is identified by a common domain name?

- A. A search engine
- B. A web page
- C. A blog
- D. A website

The correct answer is D: A website.

A website consists of multiple web pages under a single domain, while a web page is a single document and a blog is a type of website.

viii) The term URL stands for:

- A. Universal Remote Link
- B. Uniform Resource Locator
- C. Universal Resource Locator
- D. Uniform Resource Link

The correct answer is B: Uniform Resource Locator.

A URL specifies the address of a resource on the internet.

ix) Which of the following is a type of system software?

- A. Antivirus software
- B. Microsoft Word
- C. Adobe Photoshop
- D. Google Chrome

The correct answer is A: Antivirus software.

System software manages and protects the computer, while Microsoft Word, Photoshop, and Chrome are application software.

x) A program that can replicate itself and spread to other computers without human intervention is a:

- A. Virus
- B. Worm
- C. Trojan horse
- D. Spyware

The correct answer is B: Worm.

A worm is self-replicating and can spread automatically across networks, unlike a virus which typically requires user action.

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

- i. RAM → B: A volatile memory that temporarily stores data.
- ii. ROM → D: A permanent storage device that is used to store the operating system.
- iii. CPU → E: The brain of the computer.
- iv. Hard disk → A: A storage device that is non-volatile and permanent.
- v. Motherboard → C: The main circuit board of a computer.

SECTION B (75 Marks)

Attempt ALL questions from this section.

3. a) Define computer generations.

Computer generations refer to periods of development in computer technology, each marked by major technological advances.

b) State the main technology used in the first, second, and third computer generations.

First generation: Vacuum tubes

Second generation: Transistors

Third generation: Integrated circuits (ICs)

c) Mention two (2) characteristics of computers in the fifth generation.

Artificial intelligence capability and use of natural language processing.

4. a) What is a file extension?

A file extension is a suffix at the end of a file name that indicates the file type and associated program.

b) Give two (2) examples of file extensions for the following:

i. Word documents: .doc, .docx

ii. Image files: .jpg, .png

c) Explain the purpose of a folder in a computer system.

A folder organizes files into a hierarchy, making them easier to manage, locate, and access.

5. a) Explain the difference between GUI and CLI.

GUI (Graphical User Interface) uses visual elements like icons and menus for interaction, while CLI (Command Line Interface) uses typed commands.

- b) State two (2) advantages of using a GUI.

User-friendly, easier to learn and navigate.

- c) Give one (1) example of an operating system that uses a CLI.

MS-DOS.

6. a) What is e-learning?

E-learning is the use of electronic technologies to access educational curriculum outside of a traditional classroom.

- b) State three (3) advantages of using e-learning.

Flexible learning schedule, access from any location, cost-effective.

- c) Mention two (2) disadvantages of e-learning.

Limited face-to-face interaction, requires stable internet connectivity.

7. a) Briefly explain the term online banking.

Online banking allows customers to perform financial transactions through the internet without visiting a physical bank.

- b) Give two (2) examples of online banking services.

Fund transfers, bill payments.

- c) State two (2) advantages and two (2) disadvantages of online banking.

Advantages: Convenience, 24/7 access.

Disadvantages: Risk of cybercrime, requires internet access.

8. a) What is data integrity?

Data integrity refers to maintaining and assuring the accuracy, consistency, and reliability of data over its lifecycle.

b) Explain two (2) ways to ensure data integrity.

Implementing access controls, using data validation techniques.

c) Briefly describe the concept of data redundancy.

Data redundancy occurs when the same data is stored in multiple locations unnecessarily, leading to inefficiency and potential inconsistency.

9. a) Explain what computer ethics is.

Computer ethics is the study of moral guidelines and responsible behavior in the use of computers and technology.

b) Mention three (3) ethical issues related to computer use.

Privacy violations, software piracy, cyberbullying.

c) Give two (2) ways to promote ethical computer use.

Educate users on responsible behavior, implement strict organizational policies.

10. a) What is a computer laboratory?

A computer laboratory is a room equipped with computers and other resources for teaching, learning, and practical exercises.

b) State four (4) safety precautions to be observed in a computer laboratory.

Avoid eating or drinking, keep cables organized, maintain proper ventilation, handle equipment carefully.

c) Mention three (3) things that can destroy your computer.

Power surges, water damage, malware infections.

SECTION C (10 Marks)

Attempt ONLY ONE (1) question from this section.

11. The table shows the sales of five shops for the first three months.

a) Write a formula to calculate the total sales for Shop 1 in cell E2.

= B2 + C2 + D2

b) What formula would you use to find the average sales for all shops in January in cell B7?

=AVERAGE(B2:B6)

c) What is the formula to find the highest sales among all shops for the month of February?

=MAX(C2:C6)

d) Write a formula to find the total sales for all shops for the entire period.

=SUM(B2:D6)

12. a) What is networking?

Networking is the practice of connecting computers and other devices to share resources, data, and services.

b) Give two (2) differences between a peer-to-peer and a client-server network.

Peer-to-peer: All computers are equal, no dedicated server.

Client-server: Centralized server controls resources, clients request services.

c) Explain the purpose of a router in a network.

A router directs data packets between networks and manages traffic to ensure efficient communication.

d) State two (2) advantages of networking in an organization.

Resource sharing (printers, files), improved communication between employees.