THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATIONS TANZANIA

FORM TWO SECONDARY EDUCATION EXAMINATION

036   **INFORMATION AND COMPUTER STUDIES**

Time: 2:30 Hours   **ANSWERS**   **Year: 2021**

Instructions

1. This paper consists of sections A, B, and C

2. Answer all questions in section A and B and C

3. All writings must be in **blue** or **black** ink.

4. Communication devices and any unauthorized materials are **not** allowed in the assessment room.

5. Write your **Examination Number** at the top right hand corner of every page.

i. What is the name of the process of bolding and underlining paragraphs typed in the Microsoft Word?
A. Editing
B. Formatting
C. Emphasizing
D. Decorating
Answer: B. Formatting
Reason: Formatting in Microsoft Word involves applying text styles such as bolding, underlining, or italicizing to make text stand out.

ii. Which icon pastes the document when a user clicks it?
A.
B.
C.
D.
Answer: D
Reason: The icon with a clipboard and paper represents the paste function, which allows users to insert copied or cut content.

iii. Mr. John, who is a teacher, had a problem of assigning the position for each student in a class. Which software would you suggest to be used by a teacher?
A. Microsoft Publisher
B. Microsoft Access
C. Microsoft Word
D. Microsoft Excel
Answer: D. Microsoft Excel
Reason: Microsoft Excel is ideal for assigning positions because it allows data entry, sorting, and ranking using formulas and functions.

iv. Which of the following is an example of absolute cell reference?
A. B6
B. $B6
C. B6
D. B$6
Answer: C. B6
Reason: Absolute cell reference uses dollar signs before the column and row identifiers to ensure the reference does not change when the formula is copied to another cell.

v. Why is the Central Processing Unit (CPU) regarded as the brain of the computer?
A. It saves all current data.
B. It controls all input/output devices.
C. It takes all decisions and processing activities.
D. It controls the execution of application programs.
Answer: C. It takes all decisions and processing activities.

Reason: The CPU is responsible for executing instructions, performing calculations, and managing data, making it the brain of the computer.

vi. What is the function of the router on the network?
A. Provide access to the internet.
B. Interconnect different networks.
C. Convert signals from digital to analog form.
D. Divide a busy network into segments.
Answer: B. Interconnect different networks.
Reason: A router connects multiple networks and directs data packets between them, enabling communication.

vii. Which program will you use to seek specific information on the internet?
A. Search engine
B. Browser
C. Google Chrome
D. Internet Explorer
Answer: A. Search engine
Reason: A search engine is specifically designed to help users find information on the internet by indexing and retrieving web pages.

viii. What is the disadvantage of students getting uncontrolled internet access?
A. Obtain a large amount of educational information.
B. Obtain incorrect and misleading information.
C. Waste time on reading newspapers.
D. Increase ability to understand subjects.
Answer: B. Obtain incorrect and misleading information.
Reason: Without control, students may access unverified and misleading information, affecting their learning outcomes.

ix. What does the term "data" represent?
A. Processed information
B. Processed facts and figures
C. Unprocessed facts and figures
D. Meaningful information
Answer: C. Unprocessed facts and figures
Reason: Data refers to raw, unprocessed facts and figures collected for analysis.

x. Why is it advised to set a strong password in the computer?
A. To restrict unauthorized users.
B. To minimize computer virus.
C. To reduce unauthorized programs.
D. To prevent computer damage.

Answer: A. To restrict unauthorized users.

Reason: Strong passwords prevent unauthorized access to sensitive data and protect user accounts from breaches.

2. Match the features of LAN in List A with their corresponding type of network in List B.

List A

i. All devices are connected to one another in the shape of a closed loop.

ii. All devices are connected to a central cable called a backbone.

iii. Every device is connected to all other devices.

iv. Each network device has a dedicated point-to-point link to the central hub.

v. Groups of star-configured networks are connected to a linear bus backbone.

List B

A. Bus topology

B. Ring topology

C. Mesh topology

D. Star topology

E. Physical topology

F. Internet topology

G. Tree topology

H. Logical topology

Answers:

i. B

ii. A

iii. C

iv. D

v. G

3. For the first part of the image containing the True or False questions:

i. Desktop and laptop computers are examples of microcomputers.

Answer: True

Reason: Both desktop and laptop computers are classified as microcomputers because they are designed for personal use and operate using a microprocessor.

ii. A computer system is a collection of four components: hardware, software, netware, and liveware.

Answer: True

Reason: A computer system integrates hardware (physical components), software (programs), netware (network components), and liveware (users who operate the system).

iii. Uninterruptible Power Supply (UPS) helps to protect computers from being damaged by power instability.

Answer: True
Reason: A UPS provides backup power and stabilizes voltage, ensuring computers are not abruptly affected by power surges or outages.

iv. A mainframe computer is the most powerful computer designed to process huge amounts of information at a very high speed.
Answer: False
Reason: The most powerful computers are supercomputers, while mainframes are powerful but are specifically used for large-scale transaction processing and database management.

v. An error ### is displayed in a cell of a worksheet when an incorrect or invalid numeric value has been entered.
Answer: False
Reason: The ### error occurs in spreadsheet software like Excel when the column width is insufficient to display the numeric value in the cell.

4. Why do most of the organizations in the society opt to use computers in their daily activities? Briefly explain by giving five reasons.

i. Increased efficiency and productivity
Organizations use computers to process large amounts of data quickly and accurately. Tasks such as data entry, calculations, and document creation can be done more efficiently, saving time and reducing errors.

ii. Improved communication
Computers enable organizations to communicate easily through emails, video conferencing, and instant messaging. This improves collaboration among employees and with external stakeholders, regardless of their location.

iii. Data storage and management
Computers allow organizations to store and manage large volumes of data securely. Digital storage systems reduce the need for physical files and provide easy retrieval of information when needed.

iv. Automation of tasks
Organizations use computers to automate repetitive tasks such as payroll processing, inventory management, and billing. This reduces human error and ensures consistent results, freeing employees to focus on more strategic tasks.

v. Access to the internet
Computers provide organizations with access to the internet, enabling them to research, access online services, and stay updated on market trends. This is crucial for businesses to remain competitive and innovative.

5. (a) Briefly explain the Multi-user operating system. Give two examples.

A Multi-user operating system allows multiple users to access and use a computer system simultaneously. It is commonly used in networks where several users need to share resources such as printers, files, and applications. Examples of Multi-user operating systems include Unix and Windows Server.

(b) Which four resources are managed by an operating system?

i. Processor management
The operating system manages the CPU's processing time by scheduling tasks and ensuring efficient execution of programs.

ii. Memory management
It allocates and deallocates memory space for running applications, ensuring that no two programs interfere with each other.

iii. Storage management
The operating system controls data storage, organizing files, and managing access to hard drives and external storage devices.

iv. Device management
It manages hardware peripherals such as printers, keyboards, and monitors, ensuring seamless communication between hardware and software.

(c) Why is the operating system considered the main program in the computer?

The operating system is considered the main program because it acts as an interface between the user and the hardware. It manages all other software and hardware components, ensuring they work together harmoniously. Without the operating system, users would not be able to interact with the computer or run applications.

6. (a) What are the three steps required to search information on the internet?

i. Open a web browser
Launch a web browser such as Google Chrome, Firefox, or Safari to access the internet.

ii. Enter search keywords
Type the relevant keywords or phrases related to the information you need into a search engine like Google or Bing.

iii. Review and select results
Browse through the search results, select the most appropriate link, and read or download the required information.

(b). Differentiate e-learning from e-commerce.

E-learning refers to the use of electronic platforms, such as computers and the internet, for teaching and learning purposes. It allows learners and educators to interact virtually in a digital environment. On the other hand, e-commerce involves the buying and selling of goods and services through electronic platforms, particularly the internet, enabling transactions to occur online without physical interaction between buyers and sellers.

(c). What are the five disadvantages of e-learning?
i. Lack of face-to-face interaction, which can hinder the ability to ask questions and clarify doubts in real time.
ii. Dependence on internet connectivity, which makes it inaccessible in areas with poor or no internet coverage.
iii. High initial costs for purchasing devices and setting up e-learning platforms, which can be prohibitive for some.
iv. Lack of discipline among students due to minimal supervision, leading to distractions and reduced productivity.
v. Limited access for underprivileged students who may lack digital devices or technical knowledge.

7(a). Which steps would you follow to create the new worksheet?

i. Open the spreadsheet application on your computer.
ii. Click on "File" and select "New" to open a blank worksheet.
iii. Input the required data into the worksheet cells, ensuring the columns and rows align with the provided table structure.

(b). What is the cell reference of the saving account?
The cell reference of the saving account is B4 (column B and row 4).

(c) Which function can you use in cell C6 to compute the total amount?

The function to compute the total amount in cell C6 is `=SUM(C2:C5)`.

(d) Why did the company decide to use the chart to represent the data on a worksheet?
The company used the chart to make the data visually appealing and easier to interpret, allowing users to quickly compare the amounts associated with different account types.

(e). Which type of chart is presented in a worksheet?
The type of chart presented in the worksheet is a bar chart.

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8. Write steps required to perform the following tasks using Microsoft Word:

(a) Change text from lower to upper case.
i. Highlight the text you want to change.
ii. Go to the "Home" tab on the ribbon.
iii. Click the "Aa" button in the "Font" group.
iv. Select "UPPERCASE" from the dropdown menu.

(b) Align the paragraph to the center.
i. Highlight the paragraph you want to align.
ii. Go to the "Home" tab on the ribbon.
iii. Click the "Center" alignment button in the "Paragraph" group.
iv. The paragraph will move to the center.

(c) Hanging indentation.
i. Highlight the paragraph where you want to apply hanging indentation.
ii. Right-click on the text and select "Paragraph."
iii. In the "Paragraph" dialog box, go to the "Indents and Spacing" tab.
iv. Under "Indentation," set "Special" to "Hanging."
v. Adjust the measurement for the hanging indent as needed.
vi. Click "OK" to apply the changes.

(d) Setting line spacing to double.
i. Highlight the text you want to adjust.
ii. Right-click and select "Paragraph" from the menu.
iii. Go to the "Indents and Spacing" tab.
iv. Under "Spacing," set "Line spacing" to "Double."
v. Click "OK" to apply the double spacing.

9. (a) Explain the importance of insulated cables in a computer room.
Insulated cables are critical in a computer room because they prevent electrical hazards such as short circuits and electric shocks. They also reduce the risk of fire caused by exposed wires. Additionally, insulation helps in maintaining the integrity of the connections by protecting the cables from physical damage and wear.

(b) Give two ways required to prevent dust in a computer room.
i. Use air purifiers or dust filters to maintain clean air circulation.
ii. Ensure the room is sealed properly and cleaned regularly to minimize dust accumulation.
(c) State three signs which indicate that a computer is affected by a virus.
i. Unusual slowness in computer operations.
ii. Frequent crashing or restarting of the computer.
iii. Appearance of unfamiliar or unauthorized pop-up windows and programs.

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(c) Suggest three methods which can be used to prevent data loss in a computer system.

i. Regularly back up data using external drives or cloud storage services.
ii. Install and maintain reliable antivirus software to prevent data corruption caused by malware.
iii. Use Uninterruptible Power Supply (UPS) to protect against sudden power failures and surges.

10. Describe four types of computers according to the physical size, processing power, and application area.

i. Supercomputers
Supercomputers are the most powerful types of computers, designed for complex calculations and high-speed data processing. They are used in scientific research, weather forecasting, and space exploration.

ii. Mainframe Computers
Mainframe computers are large and capable of handling multiple users simultaneously. They are used in large organizations for tasks such as bulk data processing, financial transactions, and inventory management.

iii. Minicomputers
Minicomputers, also known as mid-range computers, are smaller than mainframes but still capable of supporting multiple users. They are commonly used in manufacturing and business processes for monitoring production and managing databases.

iv. Microcomputers
Microcomputers, commonly referred to as personal computers, are smaller and designed for individual use. They are widely used for personal, educational, and small business purposes. Examples include desktops, laptops, and tablets.