

**THE UNITED REPUBLIC OF TANZANIA  
NATIONAL EXAMINATIONS COUNCIL OF TANZANIA  
FORM TWO NATIONAL ASSESSMENT**

**036**

**INFORMATION AND COMPUTER STUDIES**

**Time: 2:30 Hours**

**ANSWERS**

**Year : 2022**

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**Instructions**

1. This paper consists of section A, B and C.
2. Answer all questions.
3. Communication devices and any unauthorised materials are **not** allowed in the examination room.
4. Write your **Examination Number** on every page of your answer booklet(s).

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1. Select the correct answer from the given alternatives by writing the letter of the most correct answer in the box provided.

i) Which term represents the results of processing raw facts like numbers, symbols, letters, pictures and sounds in a computer?

- A. Data
- B. Program
- C. Information
- D. Website

Answer: C. **Information is the processed result of raw data, which makes it meaningful and useful.**

ii) To prepare a computer laboratory for the Form Four final examination, the headmaster asked the system administrator to buy a non-impact printer which is very fast and which could produce printouts of higher quality. Which type of printers will be the best choice?

- A. Dot matrix printer
- B. Inkjet printer
- C. Thermal printer
- D. Laser printer

Answer: D. **Laser printers are non-impact, very fast, and produce high-quality printouts.**

iii) How many main components made up a typical computer system?

- A. 2
- B. 3
- C. 4
- D. 5

Answer: C. **A typical computer system is made up of four main components: input devices, output devices, storage devices, and the central processing unit.**

iv) Most of the teachers in a certain school that uses computers in performing their daily activities reported the problem of disappearing some files. Which is the best way of preventing data from loss and damage?

- A. Backing up the file
- B. Using password
- C. Updating anti-virus
- D. Using antiglare screen

Answer: A. **Backing up files ensures that data can be recovered even if the original files are lost or corrupted.**

v) Why do microcomputers need application software?

- A. Executes routine services such as file handling
- B. Executes specific task demanded by the user
- C. Executes a variety of fundamental operations
- D. Executes a variety of system utility functions

Answer: B. **Application software allows users to perform specific tasks such as word processing, spreadsheet calculations, or database management.**

vi) To make a student competent in adding numbers using Microsoft Excel, a teacher distributed numbers as shown in Figure 1 and asked them to compute the results. Which function can be used to find the total numbers given in row 2?

A	B	C
1	2	5
2	3	8
3	4	7

- A. =SUM(A2:A3)
- B. =SUM(A2:C2)
- C. =SUM(B2:C2)
- D. =SUM(C2:C3)

Answer: B. **=SUM(A2:C2) adds all numbers in row 2 from column A to C, which are 3 + 8 + 3 = 14.**

vii) In a school, students were advised to purchase laptop instead of desktop computers for their academic uses. Why was it advised to buy laptop computers?

- A. They are very cheap to purchase.
- B. It is easier to use laptop keyboard.
- C. They can be used everywhere.
- D. They cannot be easily damaged.

Answer: C. **Laptops are portable, meaning they can be carried and used anywhere unlike desktop computers.**

viii) Study the Screenshot provided in Figure 2 and then answer the question that follow:

Which alignments of text align the text to the right margins?

- A. 2
- B. 1
- C. 4
- D. 3

Answer: A. **In the screenshot, option 2 represents right alignment of text.**

ix) Modern Education Institute has a LAN in its Primary School and another set in its Secondary School which are located in the same district. Which device is needed to connect two LANs to enable data sharing and resources between them?

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

Answer: D. **A router is used to connect two or more LANs in different locations and enable communication between them.**

x) While preparing a Form Two terminal results in a worksheet, a teacher noticed an error message #VALUE!. What does this error signify?

- A. Used incorrect numeric values
- B. Used incorrect argument to the formula
- C. Used incorrect cell reference to the formula
- D. Used a blank cell or dividing by zero

Answer: B. **#VALUE! error occurs when the wrong type of argument or operand is used in a formula, such as adding a number to a text.**

2. Match the functions of different types of operating systems in List A with their corresponding types of operating systems in List B by writing the letter of the correct answer below the item number in the table provided.

LIST A

- i) A system that performs a task by reading the command after user pressing the enter key.
- ii) A system that enables more than one user to access a centralized computer.
- iii) A system that runs only one user program at a time.
- iv) A system that uses priority scheduling to allocate each task a portion of the time in a CPU.
- v) A system that cannot allow a user to run both word processor and spreadsheet.

LIST B

- A. Single task operating system
- B. Multi-task operating system
- C. Single user operating system
- D. Multi-user operating system
- E. Command line operating system
- F. Utility operating system
- G. Menu driven operating system
- H. Mixed user operating system

Answers with explanations:

- i) E. **Command line operating system performs tasks based on typed commands entered by the user.**
- ii) D. **Multi-user operating system allows multiple users to access a centralized computer simultaneously.**
- iii) C. **Single user operating system runs one user program at a time.**
- iv) B. **Multi-task operating system uses scheduling to allocate CPU time to multiple tasks.**
- v) A. **Single task operating system cannot run two programs like a word processor and spreadsheet at the same time.**

3. Most of the schools nowadays prefer the use of computers in performing their daily activities:

(a) Explain three uses of computers in a school.

Computers are used in schools for teaching and learning, where teachers prepare presentations and students use them to access online learning resources.

They are used for administrative purposes such as storing student records, exam results, and managing timetables.

They are also used in libraries to keep track of books, enable digital catalogues, and provide internet access for research.

(b) Give two weaknesses of computers that schools can experience.

One weakness is the high cost of purchasing, maintaining, and upgrading computers, which may strain the school budget.

Another weakness is susceptibility to technical issues such as viruses, power failures, and system crashes which can disrupt learning and administrative processes.

4. Due to the outbreak of the COVID-19 pandemic in 2020, most companies in the world allowed their employees to work from home and communicate with their offices through internet.

(a) What were the two hardware and two software used by the employees to access the internet?

Hardware:

(i) Computers or laptops, which served as the primary devices for working from home.

(ii) Smartphones, which also enabled employees to access emails, join meetings, and perform office tasks remotely.

Software:

(i) Video conferencing applications such as Zoom or Microsoft Teams, which allowed virtual meetings.

(ii) Web browsers such as Google Chrome or Mozilla Firefox, used to access online office tools and company websites.

(b) Identify two ways through which a report could be sent to the office by using the internet.

(i) Reports could be sent via email attachments to office email accounts.

(ii) They could also be uploaded to cloud storage services like Google Drive or Dropbox, where the office staff could access them.

(c) What are the two benefits the companies might experience by using this new form of working?

(i) Companies saved operational costs such as electricity, office space, and transport allowances since employees worked from home.

(ii) Productivity increased in some cases because employees could work flexibly and spend more time on tasks instead of commuting.

(d) What are the two disadvantages of working from home?

(i) Employees faced challenges of poor communication and coordination compared to physical office work, which could slow down decision-making.

(ii) Some employees experienced distractions at home and lacked access to stable internet or reliable power supply, which affected efficiency.

5. Most electronic devices such as computers and mobile phones contain the most important device which is regarded as a brain of computer.

a) Identify this device and give one reason for considering it as the brain of a computer.

This device is the Central Processing Unit (CPU). It is considered the brain of the computer because it controls and coordinates all the operations of the system and executes instructions given to the computer.

b) In which part of the system unit is the device identified in part (a) allocated?

The CPU is located on the motherboard inside the system unit.

c) Explain three functional elements of the device identified in part (a).

(i) The Arithmetic and Logic Unit (ALU) is responsible for performing all arithmetic operations like addition and subtraction and logical operations like comparison.

(ii) The Control Unit (CU) directs the flow of data and instructions between the CPU, memory, and input/output devices.

(iii) The Registers provide temporary storage inside the CPU for data and instructions currently being processed.

6. Study the screenshot of a worksheet given in Figure 3 and answer the questions that followed:

a) Identify the features labelled with letter A and B in Figure 3.

A represents the formula bar, where formulas and data being entered or edited are displayed.

B represents a cell, which is the basic unit in a worksheet for entering data.

b) Explain three types of data entries in a given worksheet. Give one example for each.

(i) Labels are text entries such as names, for example "Student".

(ii) Values are numeric entries that represent quantities, for example "150".

(iii) Formulae are expressions used to perform calculations, for example "=SUM(A1:A5)".

c) What are the procedures required for creating borders in cell A2 to A5?

First, highlight or select the cells A2 to A5.

Then, go to the formatting toolbar or ribbon and click on the "Borders" option.

Finally, choose the type of border (top, bottom, left, right, or all borders) and apply it to the selected cells.

d) Which steps would you follow to align the word EXIT vertically?

Select the cell containing the word EXIT.

Go to the alignment options on the toolbar or ribbon.

Click on the vertical text alignment option to rotate the text so that the letters appear one below the other.

7. You were given an assignment by your teacher to construct a friendly letter. In attempting the task, students proposed to use electronic word processor instead of paper to accomplish the task.

a) Why students suggest using electronic word processor instead of paper? Give two reasons.

(i) An electronic word processor allows easy editing of text, so mistakes can be corrected without rewriting the whole letter.

(ii) It also provides formatting tools such as fonts, styles, and alignment, making the letter look neat and professional.

b) Explain three possible text alignment features found in electronic word processor.

(i) Left alignment positions text evenly along the left margin, leaving the right edge ragged.

(ii) Center alignment places text evenly between the left and right margins, often used for titles.

(iii) Right alignment arranges text evenly along the right margin, leaving the left edge ragged.



8. A computer lab is supposed to have enough ventilation and it should be well protected from dust all the time.
- a) Briefly explain two problems which may be caused by lack of ventilation in a computer laboratory.
    - (i) Overheating of computers, which may cause system crashes or permanent damage to components.
    - (ii) Reduced performance of computers since excessive heat slows down processing speed.
  - b) Briefly explain two problems which may occur if a computer laboratory is not well protected from dust.
    - (i) Dust can block cooling fans and vents, leading to overheating of machines.
    - (ii) Dust may settle on internal components like the motherboard and hard drive, causing short circuits or damage.
  - c) What are the two measures that should be taken to ensure proper ventilation in the computer laboratory?
    - (i) Installing air conditioners or fans to circulate air and maintain a cool environment.
    - (ii) Designing windows and vents in the lab to allow natural airflow and prevent heat buildup.
9. During class discussion on Information and Computer Studies subject, you noticed that your fellow students confused between the concept of a file and a folder.
- a) How can you differentiate a file from a folder?

A file is a collection of data or information stored in a computer with a specific name and extension, such as a document, picture, or video. It represents actual content created by users or applications.

A folder, on the other hand, is a container used to organize and store multiple files and even other folders. It does not contain direct content but groups files together for easy management.
  - b) Which steps would you follow to create the folder on the desktop?
    - (i) Right-click on an empty space on the desktop.
    - (ii) From the context menu, point to “New”.
    - (iii) Click on “Folder” from the submenu.
    - (iv) Type a name for the new folder and press Enter.
  - c) Which steps would be followed by students in order to save file in the created folder?
    - (i) Open the application in which the file is created, for example Microsoft Word.
    - (ii) After creating the content, click on “File” from the menu.
    - (iii) Choose “Save As” option.

- (iv) From the Save As dialog box, navigate to the Desktop.
- (v) Double-click on the folder created to open it.
- (vi) Type the file name, choose the file format, then click “Save” to store the file inside the folder.

10. The headmaster uses computer network to share students’ reports with the subject teachers. However, he is interested to know the components that compose computer network. Describe to him the four basic elements of a computer network.

The first basic element of a computer network is hardware. This includes physical devices such as computers, servers, routers, switches, and cables that connect the network and allow data to be transmitted.

The second element is software. These are programs and applications that manage network functions such as communication protocols, network operating systems, and security tools to control access and protect data.

The third element is transmission media. These are the communication channels through which data travels, including wired media like Ethernet cables and wireless media like radio waves or Wi-Fi.

The fourth element is network protocols. These are standardized rules that govern communication between devices on the network, such as TCP/IP, which ensures data is properly transmitted and received across the network.