

**THE UNITED REPUBLIC OF TANZANIA  
NATIONAL EXAMINATIONS COUNCIL  
CERTIFICATE OF SECONDARY EDUCATION EXAMINATION**

**036/1**

**INFORMATION AND COMPUTER STUDIES 1**

(For Both School and Private Candidates)

**Time : 3 Hours**

**ANSWERS**

**Year : 2022**

**Instructions**

1. This paper consists of sections A, B and C.
2. Answer all questions in section A and B and **one (1)** question from section C.
3. Non-programmable calculators may be used.
4. Communication devices and any unauthorised materials are **not** allowed in the examination room.
5. Write your **Examination Number** on every page of your answer booklet(s).

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1. i) Which device is used to connect home computers to the internet?

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

Correct answer: E. Modem

Reason: A modem is the device that connects a home computer to the internet by modulating and demodulating signals.

ii) Joha wants to buy a computer for her new secretarial office. What is she supposed to consider in selecting the computer?

- A. UPS durability
- B. CPU speed
- C. Monitor speed
- D. RAM type
- E. Screen shape

Correct answer: B. CPU speed

Reason: CPU speed determines the processing performance, which is important for office work efficiency.

iii) What is the difference between “form” and “report” in database?

- A. Report is an output while form is an input object
- B. Report has header while form has footer
- C. Report is an input while form is an output object
- D. Report can be printed while form cannot be printed
- E. Report has footer while form has header

Correct answer: A. Report is an output while form is an input object

Reason: A form is used to input data into the database, while a report is used to output and present data.

iv) Why Charles Babbage is considered to be a forefather of computer?

- A. He was a founder of analytical engine

- B. He was a founder of Napier's bones
- C. He introduced tabulating machine
- D. He discovered ENIAC
- E. He created punching cards

Correct answer: A. He was a founder of analytical engine

Reason: Charles Babbage designed the analytical engine, considered the first concept of a programmable computer.

v) Which one is the correct syntax for creating a link on a web page in HTML?

- A. <LINK SRC = "abd.html">
- B. <A HREF = "abd.html">
- C. <BODY LINK = "abd.html">
- D. <A SRC = "abd.html">
- E. <LINK IMG = "abd.html">

Correct answer: B.

Reason: The tag is the correct syntax for creating hyperlinks in HTML.

vi) How are the commands (increase/decrease indent icons) used in Microsoft word?

- A. To decrease and increase indent
- B. To minimize and decrease indent
- C. To reduce and raise indent
- D. To raise and reduce indent
- E. To maximize and increase indent

Correct answer: A. To decrease and increase indent

Reason: The two indent buttons in Word are used to increase and decrease paragraph indentation.

vii) The type of computer which is used for prediction of the weather conditions worldwide is called

- A. laptop computer
- B. supercomputer
- C. mainframe computer
- D. microcomputer
- E. minicomputer

Correct answer: B. supercomputer

Reason: Supercomputers are used for highly complex calculations such as weather forecasting.

viii) Which of the following are the types of computers according to their functionality?

- A. Digital and analog computers
- B. Supercomputer and minicomputers
- C. Hybrid and microcomputers
- D. Analog and special purpose computers
- E. Digital and general purpose computers

Correct answer: A. Digital and analog computers

Reason: Based on functionality, computers can be classified as digital (discrete data) or analog (continuous data).

ix) A type of multimedia which contains animations, sound and video elements is known as

- A. hypertext
- B. hypermedia
- C. hyperlink
- D. mixed media
- E. visual media

Correct answer: B. hypermedia

Reason: Hypermedia integrates multimedia elements like sound, video, animations, and text.

x) Which Microsoft PowerPoint document views allow a user to change the position of slides?

- A. Slide show and normal/slide view
- B. Outline and slide show
- C. Outline and slide sorter
- D. Slide sorter and normal/slide view
- E. Outline and normal/slide view

Correct answer: D. Slide sorter and normal/slide view

Reason: Slide sorter and normal view allow rearranging slides by dragging and dropping.

2. Match the functions of software in List A with their corresponding names in List B by writing the letter of the correct response beside the item number in the answer booklet provided.

List A

- i) A special program that makes certain services of computing goes on smoothly.
- ii) A set of complex program that manages input, output and storage operations in a computer.
- iii) A program that is designed to help a user to accomplish specific tasks.
- iv) A type of software which is used to establish communication between two or more computers.
- v) A type of system software which is recorded permanently on an electronic chip.

List B

- A. Operating system
- B. Malware
- C. Application software
- D. Open source software
- E. Firmware
- F. Utility software
- G. Storage software
- H. Networking software

Correct answers: i) F, ii) A, iii) C, iv) H, v) E

3. Re-arrange the given sentences in a sequential order beginning with the first step to the last step.
- A. Click tools and then click backup now.
  - B. In the properties dialog box, click tools.
  - C. In my computer window, right click the Local Disk (C:).
  - D. From the shortcut menu, click properties.
  - E. Open my computer.

Correct order: E, C, D, B, A

4. (a) Joshua has a problem when typing. Every time he wishes to type the word "Goods", he mistakenly types "Gods". How can he assure himself that he has written the word Goods correctly without reading the whole document?

Joshua can use the Find and Replace feature in Microsoft Word. By typing "Gods" in the Find box and "Goods" in the Replace box, he can automatically correct all instances of the mistake throughout the document.

(b) Explain the procedures of inserting "page number" and "header and footers" into a Microsoft word document. Give the importance of each.

To insert a page number, click the "Insert" tab, then choose "Page Number", and select the desired position (top, bottom, or margins). Page numbers are important for easy navigation and referencing within the document.

To insert a header and footer, click the "Insert" tab, then choose "Header" or "Footer", and type the required text such as document title, date, or author. Headers and footers are important for providing consistent information on every page of the document.

5. Study carefully Figure 1 and then answer the questions that follow:

(a) What is the type of the network presented in Figure 1? Explain three disadvantages of using this kind of network.

The type of network is Bus topology.

One disadvantage is that if the main cable fails, the whole network goes down.

Another disadvantage is that as more devices are added, the network becomes slower due to data collisions.

A third disadvantage is difficulty in troubleshooting errors, since a fault in one part of the cable affects the entire network.

(b) Which device should be connected at D2? Give one importance of this device.

The device that should be connected is a terminator.

Its importance is to prevent signal reflection along the main cable, which could cause data collisions and communication errors.

(c) What will happen when a cable between the printer and marketing PC breaks?

If the cable breaks, communication along the bus will be interrupted. Devices after the break will not be able to communicate, causing part of the network to fail.

6. In a survey conducted on the flood which occurred in Tanzania in 2018, a worksheet was designed to record the height of flood as reported from different places around the country. The data is entered in the following worksheet and then answer the questions that follow:

(a) What are the cell references of Sites, Floods Height, Damage and Lives Loss? Give the name of the formatting done in row 1.

The cell references are:

Sites – Column A (A3:A9),

Floods Height – Column B (B3:B9),

Damage – Column C (C3:C9),

Lives Loss – Column D (D3:D9).

The formatting done in row 1 is merging and centering of cells with bold text.

(b) It was noted that the flood with a height of 200 cm or above had caused the loss of lives. Write an IF function to be used in cell D3 which will display “Yes” or “No” according to the given flood height.

The function is =IF(B3>=200,"Yes","No").

(c) Which function can you apply to find the number of sites surveyed?

The function is =COUNTA(A3:A9).

(d) Suppose you are required to generate a pie chart that displays the names of the site and the floods heights, which steps would you follow to generate the pie chart?

First, highlight the data range including site names and flood heights.

Second, click the “Insert” tab on the toolbar.

Third, select “Pie Chart” from the chart options.

Finally, format the chart by adding titles and labels for clarity.

(e) If the value in cell B4 is to be changed to 115, how many cells altogether will change?

Two cells will change, B4 itself and D4, since D4 depends on the condition of the flood height.

7. (a) What is search engine as used in ICT?

A search engine is a software application that allows users to search and retrieve information from the internet by entering keywords or phrases.

(b) Email is one of the methods used to spread viruses. Briefly explain other four limitations of using email as a means of communication.

One limitation is the risk of spam, where users receive a large number of unwanted promotional messages.

Another limitation is delay in response, as recipients may not check their email regularly.

A third limitation is the possibility of phishing, where fraudulent emails are used to steal sensitive information.

A fourth limitation is the lack of personal touch compared to face-to-face communication, which may reduce effectiveness.

8. (a) Bahati wishes to create his own business card but he does not know the appropriate software to use. Which four software would you advise him to choose?

The four software are Microsoft Publisher, CorelDRAW, Adobe InDesign, and Microsoft Word.

(b) Most of Desktop Publisher software have various tools for designing, manipulating and editing a publication. What are the functions of three common tools provided in the Microsoft Desktop Publisher?

The text tool is used to create and format text in the publication.

The picture tool is used to insert and adjust images or clip art in the document.

The shape tool is used to draw basic figures like rectangles, circles, and lines to improve design layout.



(c) Suppose you have been given a task to insert a clip art graphic into a publication in Microsoft Publisher, which steps would you follow to perform the given task?

First, open the publication and place the cursor at the point where the graphic is to appear.

Second, go to the “Insert” menu and click on “Clip Art”.

Third, search for the required graphic from the Clip Art gallery.

Finally, click “Insert” and adjust the size or position of the graphic.

9. (a) A librarian at your school wants to change the students and teachers’ record keeping system from manual to electronic database. He proposed the type of database which contains tables.
- i) Identify the name of the database model proposed.

The database model proposed is the relational database model.

- ii) Provide three advantages of a new system of record keeping.

It improves accuracy by reducing human errors compared to manual systems.

It allows quick retrieval and updating of records, saving time and effort.

It enhances security through password protection and user authentication.

(b) The following snapshot shows information about students who borrowed different books from the school library.

- i) What are the objects labelled with letters A and B? Give their names.

Object A is a Table.

Object B is a Form.

- ii) Why is an object B very important in creating the database?

A form is important because it provides a user-friendly interface for entering and editing data in the database.

- iii) Write the validation rule and the validation text used in the “NumberOfBooks” field.

Validation rule:  $\leq 5$

Validation text: "You cannot borrow more than 5 books."

10. Draw a well labelled diagram of the functional elements of the Central Processing Unit (CPU) and explain the function of each element.

The CPU diagram consists of:

- Control Unit (CU): Directs data flow between CPU, memory, and input/output devices.
- Arithmetic and Logic Unit (ALU): Performs mathematical calculations and logical operations.
- Registers: Provide temporary storage for data and instructions being processed.
- Cache memory: Stores frequently used instructions and data for fast access.

11. Explain four factors which can be considered during preparation of a presentation.

One factor is identifying the audience to ensure the content suits their level of understanding.

Another factor is organizing the content logically to flow smoothly from one point to the next.

A third factor is choosing the right visual aids such as charts, graphs, and images to support the message.

A fourth factor is rehearsing the presentation to build confidence and manage time effectively.

12. Multimedia is very popular in designing advertisements and website nowadays. Explain four advantages of using multimedia in web designing.

Multimedia makes websites more attractive by combining text, images, animations, and videos.

It increases user engagement, as interactive elements encourage visitors to stay longer on the site.

It improves communication by presenting information in multiple forms, making it easier to understand.

It enhances marketing by appealing to users visually and emotionally, increasing the chances of influencing them.