

THE UNITED REPUBLIC OF TANZANIA
NATIONAL EXAMINATIONS COUNCIL OF TANZANIA
FORM TWO SECONDARY EDUCATION EXAMINATION, 2011
0143 INFORMATION AND COMPUTER STUDIES

Time: 2:30 Hours

ANSWERS

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.

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1. Choose the correct answer from each of the following items and write its letter in the box provided.

(i) An input device:

- A. Accepts data and converts it into a form suitable for computer processing
- B. Allows the computer to manage its own resources
- C. Stores software and data in a form that is permanent
- D. Transmits computer digital signal over the telephone lines

Answer: A

Reason: An input device captures data and transforms it into a format suitable for computer processing.

(ii) Utility programs are useful for:

- A. Backup, data recovery, virus protection, and data compression
- B. Handling input and output signals of a computer
- C. Managing memory of a computer during the starting and turning off
- D. Quick setup of printer and scanner devices

Answer: A

Reason: Utility programs are designed to perform system maintenance tasks like backup, recovery, and virus protection.

(iii) RAM is a volatile memory. The term volatile means:

- A. Data in RAM is not permanent and can be changed
- B. Data in RAM is permanent and cannot be changed
- C. RAM can multitask easily and is very expensive
- D. RAM contains programs for starting the computer

Answer: A

Reason: Volatile memory means data is lost when power is turned off, as in the case of RAM.

(iv) Which of the following must be done first before an image is deleted completely?

- A. Double-click the image
- B. Move the image
- C. Resize the image
- D. Select the image

Answer: D

Reason: Selecting the image is necessary before performing any action, such as deleting.

(v) To boot a computer means to:

- A. Install a computer
- B. Service a computer
- C. Start/restart a computer

D. Switch off a computer

Answer: C

Reason: Booting refers to starting or restarting a computer system.

(vi) A hyperlink means:

- A. A text or picture that has dynamic properties on the page
- B. A text or picture that links one page to another on the internet
- C. Scrolling text or picture on the internet which has dynamic properties
- D. Scrolling text or picture on the website

Answer: B

Reason: Hyperlinks connect different web pages or documents on the internet.

(vii) The electronic mail is made up of two parts, a heading and the message. The heading is made up of:

- A. The sender's and the receiver's email address
- B. The subject and the signature
- C. The title and owner of the email
- D. Yahoo.com and Hotmail.com

Answer: A

Reason: The heading of an email includes the sender's and receiver's email addresses.

(viii) Information and communication technology refers to:

- A. Application of computers in communication
- B. Modern computers, TV, and mobile phones being used every where
- C. Modern technology that supports processing and dissemination of information
- D. Uses of the internet, cellphones, and TVs in day-to-day activities

Answer: C

Reason: ICT involves technologies used for processing, storage, and dissemination of information.

(ix) Computers consist of hardware and software. The hardware refers to:

- A. Central processing unit and monitor
- B. Collective term for physical parts of the computer
- C. Instruction for operating computer devices
- D. System unit, mouse, and keyboard

Answer: B

Reason: Hardware refers to the physical components of a computer system.

(x) A secret word known to the computer user and identified by the computer is called:

- A. Address

- B. Password
- C. Profile name
- D. User name

Answer: B

Reason: A password is a confidential code used to authenticate a user.

(xi) When data is required to be stored on a long-term basis, it is stored on:

- A. Main storage
- B. Monitor
- C. Primary storage
- D. Secondary storage

Answer: D

Reason: Secondary storage (e.g., hard drives) is used for long-term data storage.

(xii) The following are functions of the UPS except:

- A. Preventing sudden power surges to destroy the computer
- B. Providing stable power supply
- C. Supplying power to the computer during blackouts and brownouts
- D. Used as the main power source for the computer

Answer: D

Reason: UPS is not a primary power source; it is a backup during interruptions.

(xiii) To log on to the network, a user must enter:

- A. Full name and password
- B. Full name and user name
- C. User name and password
- D. User name and server name

Answer: C

Reason: User authentication requires a username and password.

(xiv) Which of the following terms was used in the second generation of computers?

- A. Large scale integrated circuit
- B. Small scale integrated circuit
- C. Transistor
- D. Vacuum tube

Answer: C

Reason: Transistors were a defining feature of the second generation of computers.

(xv) The following are traditional ways of disseminating information except:

- A. Fire
- B. Horns
- C. Internet
- D. Messenger

Answer: C

Reason: Internet is a modern means of communication, unlike traditional methods like fire and horns.

(xvi) A byte is a collection of:

- A. 4 bits
- B. 8 bits
- C. 16 bits
- D. 32 bits

Answer: B

Reason: A byte consists of 8 bits.

(xvii) The computer keyboard has a key that is used for spacing. The key is called:

- A. Backspace
- B. Enter
- C. Shift
- D. Space bar

Answer: D

Reason: The space bar is used to insert spaces between characters.

(xviii) The shortcut keys you would use to highlight or select the whole document in a word processing program is:

- A. Ctrl + A
- B. Ctrl + B
- C. Ctrl + S
- D. Ctrl + Z

Answer: A

Reason: Ctrl + A is the shortcut for selecting all content.

(xix) In a spreadsheet program, the intersection of column and row is called:

- A. Cell
- B. Data
- C. Merge
- D. Range

Answer: A

Reason: The intersection of a row and column is called a cell.

(xx) One significant role of a computer network is to:

- A. Allow hackers in the network
- B. Enable sharing of resources on the network
- C. Hinder sharing of resources on the network
- D. Limit communication of computer within the network

Answer: B

Reason: Computer networks are primarily used for resource sharing and communication.

2. Match each item in Column A with a response in Column B by writing its letter below the number of the corresponding item in the table provided.

Column A:

- (i) Ability to perform many tasks at once
- (ii) A characteristic of a communication channel that determines the rate at which data can be transmitted over the channel
- (iii) Converts computer's digital signals to analog signals and vice versa
- (iv) Enables bank customer to withdraw money in an Automated Teller Machine
- (v) Generates images from the computer using a very fine dust called toner
- (vi) Graphical presentation of worksheet data to make easier understanding
- (vii) Is a combination of a column letter and row number
- (viii) Locating and correcting errors in a computer program
- (ix) Part of the computer system that interprets instructions, performs calculations, and directs the input, storage, and output operations
- (x) The component of a computer system where programs and data are stored when not in use

Column B:

- A. Band width
- B. Cell
- C. Cell reference
- D. Central processing unit
- E. Chart
- F. Compiling
- G. Credit card
- H. Debugging
- I. Disk
- J. Dot matrix printer
- K. Identity card
- L. Laser printer
- M. Modem
- N. Multi-tasking

Answers:

- (i) N. Multi-tasking
- (ii) A. Band width
- (iii) M. Modem
- (iv) G. Credit card
- (v) L. Laser printer
- (vi) E. Chart
- (vii) C. Cell reference
- (viii) H. Debugging
- (ix) D. Central processing unit
- (x) I. Disk

3. Write TRUE if the statement is correct or FALSE if the statement is not correct.

(i) Magnetic disks and Magnetic tapes are examples of primary storage devices.

Answer: FALSE

Reason: Magnetic disks and tapes are secondary storage devices, not primary.

(ii) Print preview provides a miniature view of how a document looks like when it is printed.

Answer: TRUE

Reason: Print preview allows the user to see the document layout before printing.

(iii) Antivirus is a computer program designed purposely to destroy files and user information.

Answer: FALSE

Reason: Antivirus software is designed to protect files and user information, not destroy them.

(iv) Hardware is a mathematical and electronic device which we can see and touch.

Answer: TRUE

Reason: Hardware refers to tangible, physical components of a computer.

(v) A key that is used to erase characters at the right side of a cursor is called delete key.

Answer: TRUE

Reason: The delete key erases characters to the right of the cursor.

(vi) Auto correct, thesaurus, and tracking changes are terms used to edit the formula.

Answer: FALSE

Reason: These tools are used in word processing, not for editing formulas.

(vii) A part of the computer that executes program instructions is known as the memory.

Answer: FALSE

Reason: The CPU executes program instructions, not the memory.

(viii) An integrated circuit is one of the electronic components used in the first generation of computers.

Answer: FALSE

Reason: The first generation used vacuum tubes; integrated circuits came later.

(ix) A font refers to designs and sizes of characters in a document.

Answer: TRUE

Reason: A font defines the style and size of text characters.

(x) A spelling checker element of word processing will catch all errors made by the user.

Answer: FALSE

Reason: Spell checkers may not catch all errors, such as context-specific mistakes.

4. (a) Differentiate between the following terms as used in Information and Computer Studies:

(i) Header and Footer

- Header: Text or graphics that appear at the top of each page in a document.
- Footer: Text or graphics that appear at the bottom of each page in a document.

(ii) Application software and System software

- Application software: Programs designed to perform specific tasks for users, such as word processing or spreadsheets.
- System software: Software that manages computer hardware and provides a platform for running application software, such as operating systems.

(iii) Formula and Function

- Formula: A user-defined mathematical expression used to calculate values in a spreadsheet.
- Function: A predefined formula in a spreadsheet that performs specific calculations or tasks.

(iv) Web page and Home page

- Web page: A single, specific document or content accessible on the internet through a URL.
- Home page: The main or starting page of a website, serving as an index or introduction to the site's contents.

(v) Search engine and Internet

- Search engine: A tool or platform used to search and retrieve information from the internet, such as Google or Bing.
- Internet: A global network of interconnected computers that allows sharing of information and resources.

(b) Fill in the blanks using the list provided in the box.

Data, output, hardware, processing, computer, software, input, information, keyboard

(i) The output of one system is the input of another. Thus every system that processes data can be divided into three stages.

(ii) Input, or receiving data, processing data, and output information. In addition to these functions, the system is capable of retaining the processed information. To get (iii) information from the computer, data is put into the computer and processed according to the given set of instructions and gives out information. This set of instructions is known as (iv) software, while the physical parts of the computer which can be touched are known as (v) hardware.

(c) You have been given only four numbers 4.22, 25, 0.71, and 48 to be typed into the worksheet of Microsoft Excel program in cells A2, B2, A3, and B3 respectively.

(i) Create a formula structure that will compute the product value.

Answer: =A2*B2

(ii) Create a formula structure that will compute the average value.

Answer: =(A2+A3+B2+B3)/4

(iii) Create a formula structure that will compute the total value.

Answer: =SUM(A2:B3)

(d) Give two advantages of an electronic spreadsheet over manual spreadsheets.

i. Automation: Electronic spreadsheets allow for automated calculations using formulas and functions, reducing errors and saving time.

ii. Data visualization: Charts and graphs can be easily created to represent data visually for better analysis.

(e) (i) What is information dissemination?

Information dissemination is the process of distributing and sharing information to a target audience through various channels, such as print, digital, and oral means, to ensure its availability and accessibility.

(ii) List four common sources of information.

i. Books

ii. Internet

iii. Newspapers

iv. Television

5. Write an essay on the negative effects of the Internet on our culture.

The Internet, while being a powerful tool for communication and access to information, has had several negative effects on culture. These effects have significantly altered how individuals interact with each other and perceive societal norms. Below are the primary negative effects of the Internet on culture.

- i. Loss of traditional values: The Internet exposes individuals to a wide range of global cultures, which may lead to the erosion of traditional values and customs. Younger generations often adopt foreign lifestyles and behaviors, neglecting their cultural heritage.
- ii. Reduced face-to-face communication: With the rise of social media platforms and instant messaging, people spend more time interacting virtually rather than meeting in person. This has weakened interpersonal relationships and diminished the importance of family gatherings and community interactions.
- iii. Spread of misinformation: The Internet has made it easy to access unverified and misleading information. False narratives, fake news, and propaganda can influence cultural perceptions and lead to societal divisions.
- iv. Cyberbullying and harassment: Online platforms often expose individuals to cyberbullying and harassment, leading to psychological stress and affecting social behavior. This undermines traditional respect and civility within communities.
- v. Privacy and security issues: The sharing of personal information on the Internet can lead to privacy breaches, which might affect the trust and security traditionally valued in communities.
- vi. Addiction to digital devices: The Internet has contributed to digital addiction, particularly among young people. This addiction reduces productivity, affects mental health, and limits participation in cultural events and traditions.
- vii. Negative influence on language: The overuse of Internet slang and abbreviations has affected language preservation. Indigenous and traditional languages are at risk of being replaced by widely used global languages like English.

In conclusion, while the Internet has brought undeniable benefits, its negative effects on culture cannot be overlooked. To mitigate these effects, it is essential to promote digital literacy, regulate content on the Internet, and encourage the preservation of cultural values and traditions through education and awareness.