

051005T4ICT

ICT LEVEL 5

IT/OS/ICT/CR/01/5/A

PERFORM COMPUTER NETWORKING

Nov. /Dec. 2022



THE KENYA NATIONAL EXAMINATIONS COUNCIL

WRITTEN ASSESSMENT

Time: 3 hours

INSTRUCTIONS TO CANDIDATES

Maximum marks for each question are indicated in brackets ().

*This paper consists of **THREE** sections: A, B and C.*

Answer questions as per instructions in each section.

You are provided with a separate answer booklet.

Answer all questions in English.

This paper consists of SEVEN (7) printed pages
Candidates should check the question paper to ascertain that all pages
are printed as indicated and that no questions are missing

SECTION A (20 MARKS)

(Answer all the questions in this section)

1. A networking component that forwards data packets between a computer network is.. (1Marks)
 - A. Router
 - B. Gateway
 - C. Switch
 - D. Hub

2. The arrangement of nodes and connection within a network is called (1Marks)
 - A. Internet
 - B. Interconnectivity
 - C. Topology
 - D. Configuration

3. A link that carries traffic between two devices it connects is called (1Marks)
 - A. Connected
 - B. Dedicated
 - C. Linked
 - D. Related

4. Which of the following is a type of a network testing tool (1Marks)
 - A. Light tester
 - B. Voltmeter
 - C. Spanner
 - D. Clips

5. Which of the following is the role of the presentation layer in the network ... (1Marks)
 - A. Used for file transfer
 - B. Manages the syntax and semantics of information
 - C. Establishes sessions
 - D. Establish dialogue control

6. The TCP/IP reference model is made up of layers. (1Marks)
- A. 4
 - B. 3
 - C. 6
 - D. 7
7. Which of the following is a type of network protocol model used in network architecture. (1Marks)
- A. TCT/IP
 - B. FTP
 - C. IP
 - D. IPM
8. Which of the following is technology used to connect wirelessly (1Marks)
- A. Optic fibre
 - B. Gateway
 - C. Ethernet
 - D. Bluetooth
9. Which of the following is a wired network connection media (1Marks)
- A. Sigfox
 - B. Fibre optic
 - C. Bluetooth
 - D. Lora
10. What type of a network is used to connect computers and machines to enable them to share resources e.g. printers fax etc. (1Marks)
- A. LAN
 - B. PAN
 - C. WAN
 - D. GAN

11. Define the term HTTP (1Marks)
- A. Hypertext transmission protocol
 - B. Hypertext transmission plan
 - C. Hypertext transfer plan
 - D. Hypertext transfer protocol
12. When a message is sent to a single node from a source is referred to as..... (1Marks)
- A. Single casting
 - B. Broadcasting
 - C. Unicasting
 - D. One casting
13. SMTP uses which protocol at the transport layer.. (1Marks)
- A. TCP
 - B. UDP
 - C. IP
 - D. None of the above
14. Which of the following layers is responsible for routing ... (1Marks)
- A. Physical layer
 - B. Data link layer
 - C. Network layer
 - D. Transport layer
15. Which of the following is a private address.....? (1Marks)
- A. 11.1.2.3
 - B. 100.10.0.1
 - C. 192.168.1.1
 - D. 255.255.0.0
16. The following are network components except. (1Marks)
- A. Switches
 - B. Hubs
 - C. Ports
 - D. Windows

17. Which of the following is an example of network operating system. (1Marks)

- A. MS-DOS
- B. Microsoft Windows User
- C. UNIX
- D. All of the above

18. In a data communication system the sender is a component that sends data. Which one is a device used by the sender? (1Marks)

- A. Coaxial cable
- B. Radios waves
- C. Video camera
- D. Television

a. Which of the following represents popular forms of data to be transmitted via a network. (1Marks)

- A. Voice message
- B. Songs
- C. Text
- D. Message

19. Which of the following represents popular forms of data to be transmitted via a network.

(1Marks)

- a) Voice message
- b) Songs
- c) Text
- d) Message

20. A communication mode where one of the two devices can transmit while the other one receives is known as

(1Marks)

- A. Unidirectional mode
- B. Simplex mode
- C. Half duplex
- D. Full duplex

SECTION B (40 MARKS)

(Answer all Questions in this section)

21. List any **five** components of a data communication system. (5 Marks)
22. List down any **four** forms of data representation as used in networking. (4 Marks)
23. List **four** factors to be considered when selecting network criteria. (4 Marks)
24. Define the term protocol. (2 Marks)
25. Differentiate between point to point connection and a multi-point connection as used in networking. (2 Marks)
26. Explain any **two** types of computer networks. (4 Marks)
27. Distinguish between nodes and links as used in networking. (4 Marks)
28. Differentiate between a hub and a switch as used in networking (4 Marks)
29. State any **four** transmission media used in network. (4 Marks)
30. Mention any **three** forms of wireless data transmission used in a network. (3 Marks)
31. Explain **two** models used for remote connections and communication in a network. (4 Marks)

SECTION C (40 MARKS)

(Answer ONLY TWO Questions in this section)

32. Topology is the physical layout of the network connecting the nodes and links. Discuss any **five** networks topologies. (20 Marks)
33. Describe layers of the TCP/IP model giving details of the activities taking place at each point of the layer. (20 Marks)
34. While configuring network devices, Tom was advised to use network protocols. AS an expert in this Field, discuss **five** protocols that he may have applied (20Marks)

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