

**061205T4CYB**

**CYBER SECURITY TECHNICIAN LEVEL 5**

SEC/OS/CS/CR/03/5/A

PERFORM COMPUTER NETWORKING.

**Nov/Dec 2023**



**TVET CURRICULUM DEVELOPMENT, ASSESSMENT AND CERTIFICATION  
COUNCIL (TVET CDACC)**

**WRITTEN ASSESSMENT**

**Instructions:**

- i. Time allocated: **three (3) hours**.
- ii. This paper has three sections **A, B** and **C**. Attempt questions in each section as per instructions given in the section.
- iii. You are provided with a separate answer booklet.
- iv. Marks for each question are indicated in the brackets.
- v. Do not write on the question paper

**SECTION A (20 MARKS)**

*Answer **all** questions in this section.*

*Each question carries one mark.*

1. Identify the layer which provides service to the user.
  - A. Session layer
  - B. Presentation Layer
  - C. Application layer
  - D. Physical Layer
2. What is a HUB?
  - A. Software
  - B. Computing Device
  - C. Calculating Device
  - D. Networking Device
3. Identify among the following servers which one is mainly used to host a web site.
  - A. Mail Server
  - B. Web Server
  - C. Database Server
  - D. Link Server
4. Identify the protocol primarily used for browsing data.
  - A. FTP
  - B. STP
  - C. TFTP
  - D. HTTP
5. Identify the first network which was based on TCP/IP protocol.
  - A. ARPANET
  - B. LAN
  - C. WAN
  - D. MAN
6. What is the collection of the hyperlinked document on the internet known as?
  - A. HTML
  - B. E-mail

- C. WWW
  - D. Internet
7. What does **MIME** stand for?
- A. Multipurpose Internet Mail Extra
  - B. Multi Internet Mail End
  - C. Multipurpose Internet Mail Email
  - D. Multipurpose Internet Mail Extension
8. Identify among the following the network device used to connect two dis-similar types of networks.
- A. Switch
  - B. Hub
  - C. Bridge
  - D. Gateway
9. The arrangement where all data pass through a central computer is known as \_\_\_\_\_
- A. Ring Topology
  - B. Mesh Topology
  - C. Star Topology
  - D. Bus Topology
10. Identify the network which extends a private network across a public network.
- A. Enterprise Private Network
  - B. Local Area Network
  - C. Virtual Private Network
  - D. Metropolitan Area Network
11. Identify the layer which is responsible for data translation.
- A. Presentation
  - B. Network
  - C. Data Link
  - D. Application
12. Why are parity bits used?
- A. To encrypt data
  - B. To detect errors

- C. To identify users
  - D. To send data
13. What is a proxy server also known as?
- A. Application Level Gateway
  - B. Proxy tools
  - C. Application proxy
  - D. Application network
14. What does **PoP** stand for in networking?
- A. Pre Office Protocol
  - B. Post Office Protocol.
  - C. Protocol of Post
  - D. Point of Protocol
15. What is the number of layers in the OSI model?
- A. Two Layers
  - B. Five Layers
  - C. Seven Layers
  - D. Three Layers
16. Identify the switching method in which the message is divided into small packets.
- A. Virtual switching
  - B. Packet switching
  - C. Message switching
  - D. Data switching
17. Identify among the following servers which one allows LAN users to share data.
- A. Communication Server.
  - B. Point Server.
  - C. Data Server.
  - D. File Server
18. What are the primary responsibilities of DHCP (Dynamic Host Configuration Protocol)?
- A. Resolving domain names
  - B. Assigning IP addresses to devices on a network

- C. Encrypting network traffic
  - D. Managing network routing
19. What are the primary functions of DNS (Domain Name System)?
- A. Resolving domain names to IP addresses
  - B. Encrypting data transmissions
  - C. Managing network routing tables
  - D. Assigning IP addresses
20. Which of the following protocols is used for secure, encrypted communication over the Internet?
- A. HTTP
  - B. FTP
  - C. SSH
  - D. SMTP

## SECTION B (40 MARKS)

*Answer ALL questions in this section*

21. Highlight FIVE ways of monitoring network status. **(5 marks)**
22. State THREE methods of managing network cables. **(3 marks)**
23. Identify FIVE types of network connections. **(5 marks)**
24. Differentiate between a Hub and a switch. **(4 marks)**
25. Identify THREE drawbacks of a mesh topology. **(3 marks)**
26. Identify FIVE common software problems that can lead to network defects. **(5 marks)**
27. Differentiate between a straight-through and crossover cable **(4 marks)**
28. Identify FOUR factors that should be considered when selecting an ISP (Internet Service Provider) other than cost. **(4 marks)**
29. Identify FOUR Justifications for installing a computer network in an institution. **(4 marks)**
30. Outline THREE possible causes of a Network Interface Card that is not displaying physical connectivity **(3 marks)**

### SECTION C (40 MARKS)

Answer ANY TWO Questions in this section

31. a) Juma a network Support assistant was advised to carry out a clean network operating system software installation for his company. Describe FIVE tasks that he could have undertaken to complete the task. **(10 marks)**

b) Explain FIVE advantages of installing a clean network operating system. **(10 marks)**

32. Hypertext Ltd. company uses wireless transmission media to communicate to their clients using broadcast method

a) i) Explain the term broadcast as used in computer networking **(2 marks)**

ii) Describe TWO types of wireless transmission that could be used by the company. **(4 marks)**

iii) Explain TWO advantages wireless transmission. **(4 marks)**

b) Tom a network designer was tasked to set up a network for Ufundi Technical Institute. He was provided with a coaxial cables, 4 computers, 2 terminators and drop cables.

i) With the aid of diagram describe the most appropriate network topology he could have set up. **(6 marks)**

ii) Explain TWO advantages of the topology identified above. **(4 marks)**

33. a) Peter a Network administrator uses documents to assist him in troubleshooting and monitoring the network of SG24 Ltd. Explain TWO types of these documents. **(4 marks)**

b) He also conducts training for new employees who join the company. Explain THREE areas he is likely to cover during those training sessions. **(6 marks)**

c) He intends to propose a physical security measure for the network. Explain FIVE physical security measures that he could have identified. **(10 marks)**