

END OF SEMESTER I, 2023/24 EXAMINATION FOR DIPLOMA IN COMPUTER
SCIENCE & INFORMATION TECHNOLOGY

PROGRAMS: DIP CS & IT I

YEAR OF STUDY: 1

COURSE UNIT: FUNDAMENTALS OF NETWORKING

COURSE CODE:

DATE: 13th December 2023 TIME: 2:00 – 5: 00 PM DURATION: 3HRS

EXAMINATION INSTRUCTIONS:

- i. The paper is composed of two sections: section A and section B.
- ii. Attempt **all** questions from **Section A** and any **three** from **Section B**

Section A

1. TCP/IP is a: a. Network Hardware b. Network Software c. Protocol d. None of these	2. OSI stands for: a. Open System Interface b. Out System Interface c. Open System Interconnection d. Out System Interconnection.
3. TCP/IP mainly used for: a. File Transfer b. Email c. Remote Login Service All of these	4. Which is the lowest layer of TCP/IP model: a. Host to Host Layer b. Network Access Layers c. Internet Layer d. Application Layer
5. _____ is an access channel for computers to exchange information. a. Socket b. Port c. Gateways d. Protocol	6. Which is the type of port: a. Serial b. Parallel c. AGP d. All of these

7. Parallel Port can not connect: a. Printers b. Scanners c. Telephones d. Monitors	8. USB stands for: a. United Serial Bus b. Universal Serial By-Pass c. Universal System Bus d. Universal Serial Bus
9. Which is the fastest port for data transfer: a. USB b. Serial c. Parallel d. FireWire	10. The size of the IPv4 is: a. 16 Bits b. 32 Bits c. 64 Bits d. 128 Bits
11. Who provide us internet: a. TCP b. ISP c. FTP d. HTTP	12. URL stands for: a. Universal Resource Locator b. Uniform Resource Locator c. Uniform Radio Locator d. None of these
13. In HTTPS 'S' is stands for: a. Simple b. Secured c. Server d. None of these	14. A computer which links several PCs together in a network is called a A. Minicomputer B. Server C. Client D. Main Frame
15. NIC Stands for A. Network Interface Card B. Network Internal Card C. Network Internet Client D. Network Input Card	16. IP address means A. Internet Protocol B. Internal power C. Intranet protocol D. Internal protocol
17. Which of the following best describes a back door security attack? <input type="radio"/> A. A default set of user credentials <input type="radio"/> B. Data transmitted that can be easily sniffed <input type="radio"/> C. Accidental or intentional access to resources <input type="radio"/> D. Application code functions allowing unauthorized access	18. Which of the following best describes a denial-of-service (DoS) attack? <input type="radio"/> A. Intentional access to resources not intended for access by the user <input type="radio"/> B. Application code functions that allow unauthorized access to network resources <input type="radio"/> C. Attempt to block access by overwhelming network availability <input type="radio"/> D. Attempt to directly access the resources through unauthorized means
19. Which of the following is the best method to mitigate attacks against networking devices and services installed with a default set of user credentials? <input type="radio"/> A. Replacing them on an as-needed basis <input type="radio"/> B. Replacing them when an attack has been detected <input type="radio"/> C. Replacing them with unique strong logon credentials <input type="radio"/> D. Replacing them with the same strong logon credential	20. Which of the following is the most common origin of back doors? <input type="radio"/> A. Created during application development <input type="radio"/> B. Created during system certification <input type="radio"/> C. Created during user interface testing <input type="radio"/> D. Created during implementation

Section B:

Question B1.

- (a) List the layers of OSI and their functions in networking
- (b) Which layers are network support layers?
- (c) Which layers are user support layers?

Question B2.

What are the categories of Transmission media?

In guided (Cabled) media mention five (5) media-cables.

In unguided (Wireless) media mention three (3) media types.

What is virtual path?

What is packet filter?

Question B3.

What is a router?

What is attenuation?

What is MAC address?

What is a Repeater

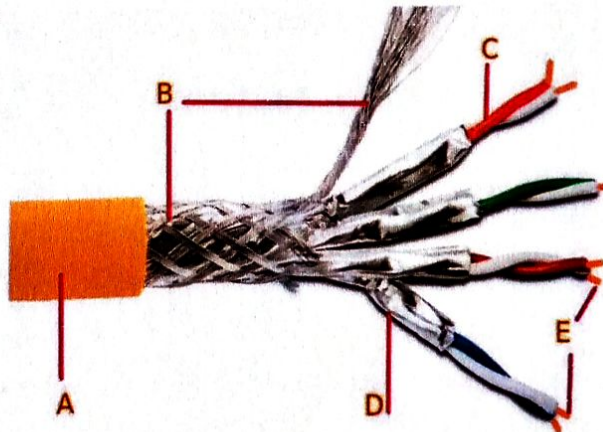
What is a Bridge

What is a Switch

Name and describe three (3) networks topologies, with the help of illustrations.

Question B4.

- a) Explain the Denial-of-Service attack (DoS)
- b) What is DHCP?
- c) Name the parts of the SFTP Cat8 Cable explaining their function in the successful transmission of data at about 40GBps speeds.
- d) What is mesh network?







Question B5.

- a) What is Email Client software? Provide 2 or more examples.
- b) What is a Web browser? Provide 2 or more examples.
- c) What is a Search Engine? Provide 2 or more examples.
- d) What is a File Transfer Protocol (FTP) Client software? Give 2 or more Examples.
- e) What is Torrent Download Client software? Give 2 Examples

Question B6:

- a) What is lap-linking?
- b) Describe the lap-link cables below and explain their functionality.

A	B	C	D
			

- c) Explain the limitations of Blue tooth Peer to Peer networking.