

7438

BOARD DIPLOMA EXAMINATION, (C-20)

MAY—2023

DCME - FOURTH SEMESTER EXAMINATION

COMPUTER NETWORKS

Time : 3 Hours ]

[ Total Marks : 80

**PART—A**

3×10=30

- Instructions :** (1) Answer **all** questions.  
(2) Each question carries **three** marks.  
(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. List the hardware and software components required for computer networking.
2. What is wi-fi?
3. Write the merits of hybrid topologies.
4. List the LAN connectors.
5. What is classful addressing?
6. List the disadvantages of sub-netting.
7. Define Address Resolution Protocol (ARP).
8. What is the difference between share and NTFS permissions?
9. Define device manager.
10. What is network administration?

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**PART—B**

8×5=40

- Instructions :** (1) Answer **all** questions.  
(2) Each question carries **eight** marks.  
(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

**11.** (a) Explain in detail about OSI reference model. 8

**(OR)**

(b) Explain the functions of each layer of TCP/IP reference model. 8

**12.** (a) Explain about coaxial and optical fibre cables. 4+4

**(OR)**

(b) Write Short notes on (i) hubs, (ii) switches and (iii) gateways. 3+3+2

**13.** (a) Discuss in detail about the internet protocol version 4 and 6 addressing schemes. 4+4

**(OR)**

(b) Explain sub-netting with a simple example. 8

\* **14.** (a) Explain in detail about DHCP and DNS protocols. 4+4

**(OR)**

(b) Explain about RMON. 8

**15.** (a) Explain about disk management tools and tasks. 8

**(OR)**

(b) Discuss the responsibilities of a network administrator in detail. 8

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## PART—C

10×1=10

- Instructions :** (1) Answer the following question.  
(2) The question carries **ten** marks.  
(3) Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.

**16.** Consider a block of IP addresses ranging from 100.1.2.32 to 100.1.2.47

- (a) is it a CIDR block?  
(b) if yes, give the CIDR representation.

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