



C14-EC-506

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**BOARD DIPLOMA EXAMINATION, (C-14)  
MARCH/APRIL—2017  
DECE—FIFTH SEMESTER EXAMINATION**

DATA COMMUNICATION AND COMPUTER NETWORKING

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. Define computer network and state its use.
2. Define simplex, half-duplex and full-duplex communication.
3. Compare the performances of bus and star network topologies.
4. State the need for protocols in computer networks.
5. Define internet protocol.
6. Distinguish between connection-oriented (virtual circuit) and connectionless (datagram) services.
7. State the need for FRAME relay WAN protocol.

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8. State the use of gateways.
9. List the differences between SMTP and POP server.
10. State the purpose of proxy server.

**PART—B**

10×5=50

**Instructions** : (1) Answer *any five* questions.

(2) Each question carries **ten** marks.

(3) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.

11. Explain the circuit switching and packet switching.
12. Explain the working of token ring network.
13. Explain the topology of wireless LAN and explain its frame format (IEEE 802.11).
14. Explain the packet transfer mechanism using routers and IP address.
15. Explain the internal architecture of ISP.
16. Describe the working of X.25 WAN protocol.
17. Explain different layers of TCP/IP.
18. Explain the working of Web server.

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