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Question Paper Code : 81178

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2025.

Fifth Semester

Computer Science and Engineering

CS 3591 — COMPUTER NETWORKS

(Common to : Computer Science and Engineering (Cyber Security)/Computer and Communication Engineering/Information Technology)

(Regulations 2021)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is IMAP Protocol?
2. Define the functions of the Session layer.
3. What is the connectionless protocol?
4. Define SCTP.
5. What is a subnet mask?
6. What is the broadcast address?
7. Brief about path vector routing.
8. Define Border Gateway Protocol.
9. Define circuit switching.
10. What are the advantages of PPP?

PART B — (5 × 13 = 65 marks)

11. (a) Explain the TCP/IP protocol suite with a neat diagram.

Or

- (b) Discuss about the importance of DNS. How is it working?

12. (a) How Flow control mechanism handled in TCP? Explain.

Or

(b) Describe how connection management is handled in TCP.

13. (a) How does RARP work? Explain.

Or

(b) Describe the different addressing schemes IPV4.

14. (a) Explain about RIP routing in detail.

Or

(b) How is DVMRP routing working? Explain.

15. (a) Describe the different error control mechanisms handled in the data link layer.

Or

(b) How does the HDLC protocol work? Explain.

PART C — (1 × 15 = 15 marks)

16. (a) How DNS transfer a message from one person to another person in a different country? Write the steps involved in the DNS process.

Or

(b) How ICMP protocol manage the Internet? Explain the different strategies of ICMP.