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Question Paper Code	12502
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B.E. / B.Tech. / M.Tech - DEGREE EXAMINATIONS, NOV / DEC 2023

Fourth Semester

Computer Science and Engineering

(Common to Information Technology, Fifth Semester - M.Tech. Computer Science and Engineering & Computer and Communication Engineering)

20CSPW401 - COMPUTER NETWORKS WITH LABORATORY

(Regulations 2020)

Duration: 3 Hours

Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

- | | <i>Marks,
K-Level, CO</i> |
|---|-------------------------------|
| 1. List the five components of data communication. | <i>2,K1,CO1</i> |
| 2. Define Computer Networks. | <i>2,K1,CO1</i> |
| 3. Define framing. | <i>2,K1,CO2</i> |
| 4. What is meant by bit stuffing? Give an example. | <i>2,K1,CO2</i> |
| 5. What is the need for fragmentation? | <i>2,K1,CO3</i> |
| 6. Differentiate between forwarding table and routing table. | <i>2,K2,CO3</i> |
| 7. Compare TCP and UDP. | <i>2,K2,CO4</i> |
| 8. State the advantages of connection oriented services over connectionless services. | <i>2,K1,CO4</i> |
| 9. Define SMTP. | <i>2,K1,CO5</i> |
| 10. State the need of DNS. | <i>2,K1,CO5</i> |

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

11. a) Explain the different types of packet switching techniques with suitable networks. Write each of its advantages and disadvantages. *13,K2,CO1*
- OR**
- b) Interpret the major functions performed by the layers of the ISO-OSI model. *13,K2,CO1*
12. a) Explain in detail about the point to point protocol (PPP) with a neat sketch. *13,K2,CO2*
- OR**
- b) Classify in detail about High-level Data Link Control and the types of frames. *13,K2,CO2*

13. a) Discuss the function of the Border Gateway Protocol used for Inter domain routing in internetwork. *13,K2,CO3*
- OR**
- b) Explain about IPv6. Also compare IPv4 and IPv6. *13,K2,CO3*
14. a) Discuss in detail about the three mechanisms by which congestion control is achieved in TCP and differentiate these mechanisms. *13,K2,CO4*
- OR**
- b) Identify and explain the various functionalities of SCTP. *13,K2,CO4*
15. a) What is SSH? Explain in detail about its functions. *13,K2,CO5*
- OR**
- b) Explain in detail about HTTP operation. *13,K2,CO5*

PART - C (1 × 15 = 15 Marks)

16. a) Discuss the function and importance of Simple Network Management Protocol (SNMP). *15,K2,CO6*
- OR**
- b) Describe about client/server application program TELNET. *15,K2,CO6*