

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
MCA I Year II Semester Regular Examinations May-2026
COMPUTER NETWORKS

Time: 3 Hours**Max. Marks: 60**

(Answer all Five Units 5 x 12 = 60 Marks)

UNIT-I

- 1 Describe the TCP/IP model, explaining the functionality of each layer with neat sketch. **CO1 L2 12M**

OR

- 2 a Write a short note on ARPANET with example. **CO1 L2 6M**
b Explain how the Internet has changed over time. **CO L2 6M**

UNIT-II

- 3 a Explain the working of the World Wide Web. **CO2 L2 6M**
b Explain HTTP request and response messages. **CO2 L2 6M**

OR

- 4 a Explain the role of DNS in the Internet with example. **CO2 L2 6M**
b Describe the DNS name resolution process. **CO2 L2 6M**

UNIT-III

- 5 a Explain TCP segment structure with example. **CO3 L2 6M**
b Explain TCP connection establishment and termination. **CO3 L2 6M**

OR

- 6 a Explain flow control and congestion control in TCP. **CO3 L2 6M**
b Explain TCP congestion control algorithms. **CO3 L2 6M**

UNIT-IV

- 7 a Explain the responsibilities of the network layer. **CO4 L2 6M**
b Describe virtual circuit networks with examples. **CO4 L2 6M**

OR

- 8 Explain multicast routing, including IGMP and reverse path forwarding. **CO4 L2 12M**

UNIT-V

- 9 a Explain error-correction techniques with examples. **CO5 L2 6M**
b Describe framing techniques used in the link layer. **CO5 L2 6M**

OR

- 10 Explain multiple access links and protocols, comparing ALOHA, CSMA/CD, and CSMA/CA. **CO5 L2 12M**

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