

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)

MCA I Year II Semester Regular & Supplementary Examinations August - 2023
COMPUTER NETWORKS

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

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

UNIT-I

- 1 a Describe OSI Reference Model with suitable diagram. CO1 L2 6M
b Write the algorithm for computing the CRC and Compute CRC for the frame 1101011111 using the generator $G(x) = x^4 + x + 1$. CO1 L4 6M

OR

- 2 a Explain Go-Back-N and Selective Repeat Protocol. CO1 L2 6M
b Compare CSMA and CSMA/CD. CO1 L4 6M

UNIT-II

- 3 a Explain Distance Vector Routing. Explain the disadvantage associated with this algorithm. CO2 L2 6M
b Explain the approaches that are used to prevent the congestion control. CO2 L2 6M

OR

- 4 a Explain Link State Routing Protocol. CO2 L2 6M
b Explain the working of Hierarchical routing with a quantitative example of routing in a two-level hierarchy with five regions. CO2 L3 6M

UNIT-III

- 5 a What is Packet Fragmentation? Explain its types. How Path MTU works? CO3 L2 6M
b Why ATM Networks are needed? Draw and Explain ATM cell format. CO3 L2 6M

OR

- 6 a Draw and Explain IPv4 header in detail. CO3 L2 6M
b Explain the working of OSPF protocol in detail. CO3 L2 6M

UNIT-IV

- 7 a Explain three-way handshake protocol with possible scenarios to establish a connection. CO4 L3 6M
b Explain TCP Segment header in detail. CO4 L2 6M

OR

- 8 a Illustrate Four Protocol Scenarios for releasing a connection. CO4 L4 6M
b Explain UDP header and RPC. CO4 L2 6M

UNIT-V

- 9 a Explain the architecture of the email system. CO5 L3 6M
b Explain the working of DES. CO6 L3 6M

OR

- 10 a Explain working of HTTP with respect to types of connections. CO5 L3 6M
b Explain RSA method in detail. CO6 L3 6M

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