U.S.N

P.E.S. College of Engineering, Mandya - 571 401
(An Autonomous Institution affiliated to VTU, Belagavi)
Third Semester, Master of Computer Applications (MCA)
Semester End Examination; Feb. - 2021
Computer Networks

Time: 3 hrs   *Max. Marks: 100*

*Note: Answer **FIVE** full questions, selecting **ONE** full question from each unit.*

UNIT - I

1 a.	Define computer networks. Explain the layers of OSI reference model.	12
b.	Explain the following: i) Delay ii) Throughput	8
2 a.	Define topology. Explain different types of topology.	12
b.	Demonstrate the packet switching network architecture in detail.	8

UNIT - II

3 a.	Illustrate the E-mail communication process in application layer protocol.	10
b.	Explain the general frame format of an HTTP request and response message.	10
4 a.	Illustrate sliding window protocol working in different scenario.	10
b.	Explain the high-level view of the internet E-mail system communication through SMTP protocol.	10

UNIT - III

5 a.	Compare the working of Multiplexing and Demultiplexing concept in transport layer protocol.	10
b.	Discuss Go-back-N window and Sliding window protocol in detail.	10
6 a.	Distinguish reliable data transfer communication service model and service implementation in different layers.	10
b.	Explain the TCP segment frame format.	10

UNIT - IV

7 a.	Discuss the IPv4 datagram frame format.	10
b.	Explain Distance Vector Routing algorithm.	10
8 a.	Compare the virtual circuit and datagram subnet network architecture with its components.	10
b.	Explain the BGP in detail.	10

UNIT - V

9 a.	Explain the error detection and error correction scenario in detail.	10
b.	Discuss pure aloha and slotted aloha in detail.	10
10 a.	Check the frame 1101011011 is transfer to the destination without any error to the destination, if error has encounter make that frame to be transfer without any error to the destination using CRC technique. Generator as 10011.	10
b.	Discuss DNS namespace and WWW.	10

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