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Roll No. :

328732(28)

B. E. (Seventh Semester) Examination, Nov.-Dec. 2021

(New Scheme)

(Et&T Engg. Branch)

COMPUTER NETWORKS

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

Note : Attempt all the questions. Part (a) of each question is compulsory and is of 2 marks. Part (b), (c) and (d) are of 7 marks. Attempt any two of them.

Unit-I

1. (a) What are the types of transmission modes? 2
- (b) Elaborate Bus, Ring, Star and Mesh topologies and compare them alongwith required diagram. 7

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- (c) Explain Full Duplex transmission in EIA-232 D, DET to DCE Interface. 7
- (d) Discuss various types of the signal encoding techniques used in computer networks. Elaborate Unipolar and Polar Line Coding schemes with their waveforms. 7

Unit-II

2. (a) What is Bit Stuffing? 2
- (b) Explain the mechanism of Go Back N. Compare its performance with selective Reject ARQ system. 7
- (c) What are the types of frames used in HDLC? Draw the frame format of each frame. 7
- (d) How CRC helps in error control? Give an example to show the mechanism used by sender and receiver to calculate CRC and detect error. 7

Unit-III

3. (a) Name few IEEE standards involved in project 802. 2
- (b) Discuss the implementation of IEEE 802.3 with its MAC mechanism i.e. CSMA/CO. 7

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- (c) Draw the architecture of wireless protocol IEEE 802.11 with its MAC mechanism 7
- (d) Explain Token Ring Protocol or FDDI in detail. 7

Unit-IV

4. (a) Write two differences between IPV4 and IPV6. 2
- (b) Draw IPV4 Header and explain its fields in detail. 7
- (c) What is TCP? Draw TCP header and explain its function at transport layer. 7
- (d) Elaborate the functions of Repeater, Hub, Bridge and Router. 7

Unit-V

5. (a) What is FTP? 2
- (b) Explain the working of ICMP, ARP and RARP. 7
- (c) Discuss the architecture of ATM. 7
- (d) Name the three layers of ATM and explain any one Application Adaptation Layer (AAL) 7