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B. E. (Seventh Semester) Examination,
April-May 2020/NOV-DEC 2020

(New Scheme)

(ET & T Engg. Branch)

COMPUTER NETWORKS

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

Note : Attempt all questions. Part (a) of each question is compulsory. Attempt any two parts from (b), (c) and (d).

Unit-I

1. (a) What is meant by topology? Name the various topologies of the network.   2

(b) Explain OSI model its functions, protocols and services of each layer. 7

(c) Explain the signal encoding technique for digital to digital conversion using polar method, also explain how NRZ-L differ from NRZ-I. 7

(d) Explain the transmission of digital data. 7

Unit-II

2. (a) What is Bit Stuffing? 2

(b) If the divisoris 1101 and the meassage bits are 100100. Obtain the CRC code. 7

(c) Explain the flow control mechanisms applied in data link layer. 7

(d) Write short notes on : 7

(i) Data transparency

(ii) HDLC

Unit-III

3. (a) Explain fast Ethernet. 2

(b) Discuss various IEEE standards. Explain working of IEEE 802·3. 7

(c) Draw and explain frame format of FDDI protocol. 7

(d) Explain the CSMA/CA. 7

Unit-IV

4. (a) Explain the structure of IP address. 2

(b) State difference between IPV4 and IPV6 protocols. 7

(c) Write short notes on ARP and ICMP. 7

(d) Explain the relationship of repeater, bridges, routers and gateway to OSI reference model. 7

Unit-V

5. (a) Define the term HTTP. 2

(b) What is ATM reference model? Name the ATM layers and their functions. 7

(c) List out differences between circuit and packet switching. 7

(d) Explain virtual connection, identifiers, cells and connection establishment. 7