Total No. of Questions : 6]

SEAT No. :

P71

[Total No. of Pages : 2

Oct./TE/Insem. - 190
T.E. (Computer)
COMPUTER NETWORKS
(2015 Course) (Semester - I)

Time : 1 Hour] *[Max. Marks : 30*

Instructions to the candidates:

1) ***Neat Diagrams must be drawn wherever necessary.***
2) ***Figures to the right side indicate full marks.***
3) ***Use of Calculator is allowed.***
4) ***Assume suitable data, if necessary.***

Q1) a) Draw TCP/IP reference model and Write function of each layer. **[6]**

b) For the bit sequence 10000101111 draw the waveform for **[4]**

i) Manchester Encoding

ii) Differential Manchester Encoding

OR

Q2) a) Explain in brief: FHSS and DSSS. **[4]**

b) What are different types of topology? Explain any one. **[6]**

Q3) a) Explain in detail ,working of PPP with state transition diagram ? **[6]**

b) Given the dataword 1001000 and divisor 1011 **[4]**

i) Show the generation of the codeword at the sender's site (using binary division)

ii) Show the checking of the codeword at the reciver site (Assume no error)

OR

P.T.O.

Q4) a) Compare and contrast the Go-Back-N ARQ protocol with Selective-Repeat ARQ. **[6]**

b) In a Stop-and-Wait system, the bandwidth of the line is 1 Mbps, and 1 bit takes 20 milliseconds to make a round trip. What is the bandwidth-delay product? If the system data packets are 1,000 bits in length, what is the utilization percentage of the link? **[4]**

Q5) a) Draw 802.11 frame format and explain addressing mechanism in detail. **[6]**

b) Measurement of a slotted ALOHA channel with an infinite number of users, show that 10 percent of the slots are idle: **[4]**

i) What is the channel load?

ii) What is the throughput?

iii) Is the channel underload or overloaded?

OR

Q6) a) Explain MAC sublayer (DCF) in wireless LAN. **[4]**

b) Explain CSMA/CD flowchart **[4]**

c) What are common implementations of Fast Ethernet (100 Mbps) **[2]**

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