Total No. of Questions : 6]

SEAT No. :

P4190

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M.E. (Computer Engineering)
ADVANCED COMPUTER NETWORKS
(2013 Course) (Semester-II) (510109)

Time : 3 Hours] *[Max. Marks : 50*

Instructions to the candidates:

1) ***All questions are compulsory.***
2) ***Neat diagrams must be drawn wherever necessary.***
3) ***Figures to the right side indicate full marks.***
4) ***Use of Calculator is allowed.***
5) ***Assume Suitable data if necessary.***

Q1) a) Explain general principals of network design and write the process of network design. **[9]**

OR

b) Explain the issue of resource allocation and mobility with suitable examples. **[9]**

Q2) a) What is Multiplexing of Traffic on a Communication Link? Explain any two Applications of Little's Theorem. **[8]**

OR

b) The mean time between arrivals of customers in a bank is 3 minutes. Write the expression for the exponential distribution for average time between arrivals for any time t (t > = 0). If a customer has already arrived in the bank, what is the probability that the next customer will come after 10 minutes? What is the probability that 5 customers will arrive in the one hour interval? **[8]**

Q3) a) Explain open, semi open and closed queue network with suitable example. **[8]**

OR

b) What is CMST? Explain how Sharma's algorithm optimizes CMST? **[8]**

P.T.O.

Q4) a) What is resource reservation in traffic engineering? Explain with suitable examples. **[8]**

OR

b) Enlist and explain different Quality of Services mechanisms considered while designing networks. **[8]**

Q5) a) What is a routing using mask? Compare Unreliable, Connectionless and Best effort IP service. **[8]**

OR

b) Explain aggregation feature in IPV6 with suitable examples. **[8]**

Q6) Write Short notes on (any Three): **[9]**

a) Wireless and sensor networks

b) Domain specific network

c) Computer Network Simulation

d) Next generation networks