Total No. of Questions : 6]

SEAT No. :

P4866

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[5060] - 808

M.E. (Computer Engineering) (Semester - II)

ADVANCED COMPUTER NETWORKS

(2013 Pattern)

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) Enlist and explain different network functions and explain the issue of "where to implement the capability" with suitable examples. **[9]**

OR

b) With respect to network design, explain the issue of reliability and mobility with suitable examples. **[9]**

Q2) a) Explain use of balance equation in analysis of M/M/2 and M/M/n queue model. **[8]**

OR

b) Explain little's theorem with proof and what is memory less property of exponential distribution. **[8]**

Q3) a) What is centralized network design; explain different issues associated with it. **[8]**

OR

b) Define minimum spanning tree and explain Bin Packing Algorithm. **[8]**

Q4) a) What is resource reservation with respect to quality of service in networks? Explain with suitable examples. **[8]**

OR

b) What is Quality of Srevice in network design, explain any three Quality of Service mechanisms. **[8]**

P.T.O.

Q5) a) What is routing using masks? Explain with suitable examples. **[8]**

OR

b) What is fragmentation? Explain fragmentation of IP packet. What if the size of an IP datagram exceeds the MTU? What if the route contains networks with different MTUs. **[8]**

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

a) Domain specific networks

b) Computer network simulation

c) Next generation networks architecture

d) Wireless and sensor networks.

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