Total No. of Questions : 12] SEAT No. :

P2040 [Total No. of Pages : 2

[5059]-645

B.E. (Computer Engineering)

COMPUTER NETWORK DESIGN AND MODELING

(2012 Pattern) (Semester - I)

Time : 2½ Hours] *[Max. Marks : 70*

Instructions to the candidates:

1) *All questions are compulory.*
2) *Neat diagrams must be drawn wherever necessary.*
3) *Figures to the right indicate full marks.*
4) *Assume suitable data if necessary.*

Q1) a) Explain RMA. [4]

b) Explain network supportability. [3]

OR

Q2) a) What are the application groups? [4]

b) Explain Network requirements. [3]

Q3) a) Explain service metrics for delay. [4]

b) What do you mean developing RMA requirement "Availability"? [3]

OR

Q4) a) Given an MTBCF requirement of 8000 hours and an MTTR requirement of 4 hours, calculate an availability requirement. [4]

b) Environment Specific Thresholds and Limit. [3]

Q5) What are the different flow models? Explain any two : [6]

OR

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Q6) Explain the concept of Flow map. [6]

Q7) What are addressing mechanisms in computer network? Explain classful addressing, subnetting, variable-length subnetting, and supernetting. [16]

OR

Q8) What do you mean by routing strategies? Explain [16]

a) Evaluating routing protocols.

b) Choosing and Applying Routing Protocols.

Q9) a) Explain the following performance mechanisms. [10]

i) Quality of Service

ii) Prioritization, Traffic Management, Scheduling and Queuing

b) What are the network design products? Enlist all and explain any two. [8]

OR

Q10) a) Explain following network layouts. [10]

i) Logical Diagrams

ii) Network Blueprints

b) What are the major components of the evaluation process for vendors, service providers, and equipment? [8]

Q11) Write notes on : [16]

a) Smart Pointers.

b) Modeling network elements.

c) Network Simulators.

d) Object aggregation.\

OR

Q12) a) Explain network simulator -ns3. [8]

b) OMNet++ [8]