BE INSEM AUG 2015

Total No. of Questions :6]

SEAT No. : 30

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BE/In Sem. - 77

B.E.(Computer Engg.)

COMPUTER NETWORK DESIGN AND MODELING

(2012 Course) (410444B) (Semester - I) (Elective -I)

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

Instructions to the candidates:

1) *Answer any 3 questions.*
2) *Neat diagrams must be drawn wherever necessary.*
3) *Use of electronic pocket calculator is allowed.*
4) *Assume suitable data, if necessary.*

Q1) a) What is Network Analysis? Give the inputs to and outputs from network analysis, architecture and design process. **[6]**

b) Why is requirements analysis important to network architecture and design? Give three reasons. **[4]**

OR

Q2) a) Which of the following applications require best-effort (unpredictable and unreliable), guaranteed (predictable and reliable, with accountability), or predictable service. Give reasons for your choices. **[6]**

- Voice over IP (VoIP) calls
- File transfers via FTP
- Audio file downloads

b) Give an example of a mission critical application for the government environment. Why this application is considered as mission critical? **[4]**

Q3) a) What is service metrics? Where to apply service metrics? List any thee service measurement tools. **[6]**

b) Define Reliability, Maintainability and Availability with an example. **[4]**

OR

P.T.O.

Q4) a) Discuss in brief- **[6]**

i) End-to-End and Round-trip delays

ii) Modeling and Simulation.

b) Give an MTBCF requirement of 8000 hours and an MTTR requirement of 4 hours, Calculate an availability requirement. **[4]**

Q5) a) Explain any two network architectural models in brief. **[6]**

b) What are Flows? List common flow characteristics of network. **[4]**

OR

Q6) a) What is Flow model? Explain Peer-to-Peer and Client-Server models. **[6]**

b) Explain in short with examples - Data Sources and Sinks in flow. **[4]**

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