

Code No: R05320401

R05**Set No. 2**

III B.Tech II Semester Examinations, December 2010
TELECOMMUNICATION SWITCHING SYSTEMS AND NETWORKS
Common to Electronics And Telematics, Electronics And Communication
Engineering

Time: 3 hours**Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

1. (a) Define overload traffic and explain different ways of handling it.
 (b) Over a 20-minute observation interval, 40 subscribers initiate calls. Total duration of the calls is 4800 seconds. Calculate the load offered to the network by the subscribers and the average subscriber traffic. [8+8]
2. (a) Derive expression for the blocking probability of a TSST switch if each stage is individually non blocking.
 (b) Design an STS switch for 256 primary TDM signals of CCITT, $P_B=0.002$ and $p=0.2$ per channel. How many TSI circuits are needed? What is the complexity of the switch? [8+8]
3. (a) Explain about direct inward dialing facility for PABXs.
 (b) Explain about charging plan for telecommunication services. [8+8]
4. (a) Describe frame format of ISDN
 (b) Describe bearer, tele & supplementary services. of ISDN [8+8]
5. (a) With the help of a block diagram, explain two point data communication circuit.
 (b) What is the function of serial interface? Explain physical electrical and functional characteristics of the RS 232 serial interface. [6+10]
6. (a) Why is it necessary to keep the magnetic diaphragm in an earphone displaced from its unstressed position? How is this achieved?
 (b) Estimate the bandwidth requirements of a single satellite that is to support 20 million telephone conversations simultaneously. [8+8]
7. (a) What is the Relationship between STS & STM ? What is the relationship between STS levels and OC levels?
 (b) Distinguish between DSL and ADSL. [10+6]
8. (a) Explain the function of each layer of ISO-OSI reference model with the help of neat sketch.
 (b) What are the principles that were applied to arrive at different layers in OSI reference mode ? Explain. [10+6]

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R05**Set No. 4**

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R05**Set No. 1**

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R05**Set No. 3**

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 (b) Explain about charging plan for telecommunication services. [8+8]
