Code No: 07A60401 **R07** **Set No. 2**

III B.Tech II Semester Examinations,December 2010
TELECOMMUNICATION SWITCHING SYSTEMS
Electronics And Communication Engineering

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

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Explain the function of NT_I, NT_2, and TE_1 & TE_2. Functional groupings of ISDN.
   (b) What is the relationship between ISDN layers and OSI layers? [8+8]
2. (a) Distinguish between in-band and out-band signaling.
   (b) In an exchange, the calls arrive at the rate of 1100 calls per hour with each call holding for a duration of three minutes. If the demand is serviced by a trunk group of 50 lines, determine the GOS. [10+6]
3. What is centralized stored program control? Explain in detail. [16]
4. Explain the concepts of circuit switching, packet switching and virtual Circuit switching. [16]
5. (a) Write a note on DOCSIS.
   (b) Explain the operation of cable modem. [8+8]
6. What is hybrid? Explain the operation of Echo suppressor with the help of neat sketch. [16]
7. (a) What is modem synchronization and equalization?
   (b) What is character synchronization? Explain asynchronous and Synchronous Data Formats. [8+8]
8. (a) Compare non -blocking and blocking cross bar switches with their merits and Demerits.
   (b) Distinguish between single stage and multistage switching networks. [8+8]

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Code No: 07A60401 **R07** **Set No. 4**

III B.Tech II Semester Examinations,December 2010
TELECOMMUNICATION SWITCHING SYSTEMS
Electronics And Communication Engineering

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

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Distinguish between channel associated and channel .non associated mode of signaling.
   (b) A group of 20 servers carry a traffic of 10 erlangs. If the average duration of a call is three minutes, calculate the number of calls put through by a single server and the group as a whole in a one hour period. [10+6]
2. Discuss the three modes of operation of dual processor architecture in detail. [16]
3. (a) Define data communication standards and explain why they are necessary.
   (b) Compare and contrast serial and parallel data transmission. [8+8]
4. (a) What are the different forms of signaling providing by switching system? Explain in detail.
   (b) Explain the operation of reed relay cross point? [8+8]
5. (a) Describe unigauge design of subscriber loops.
   (b) Explain the operation two-wire to four-wire transformer. [8+8]
6. (a) Discuss features of HFC Networks.
   (b) How does ADSL divide the band width of a twisted pair cable?
   (c) Explain the terms Section, Line & Path related to SONET. [6+5+5]
7. Explain the operation of Source routing bridge and compare with Transparent bridge. [16]
8. (a) Write a note on application Adaptation layer.
   (b) What are the functions of ATM layer? Explain various fields in ATM Cell header. [8+8]

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Code No: 07A60401 **R07** **Set No. 1**

III B.Tech II Semester Examinations,December 2010
TELECOMMUNICATION SWITCHING SYSTEMS
Electronics And Communication Engineering

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

Answer any FIVE Questions
All Questions carry equal marks

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1. What are the topologies adopted by telecommunication network. Explain the hierarchical topologies in detail . [16]
2. (a) What is the Need for layered architecture? Explain.
   (b) Explain the process of en-capsulation and de-capsulation. [8+8]
3. How do you classify signaling techniques? Briefly explain about each technique. [16]
4. (a) In what way is stoked program control superior to hard wired control.
   (b) Describe various switching network configurations with suitable sketches. [8+8]
5. (a) Compare ADSL, VDSL, HDSL and SDSL Technologies.
   (b) Write a note on Traditional Cable Networks. [8+8]
6. (a) Explain the significance of the reference points R, S, T, U related to ISDN.
   (b) Discuss interactive and distributed services of BISDN. [8+8]
7. Compare two stage time Space switch and space time switch. [16]
8. (a) Describe layered network architecture.
   (b) What is a protocol? Distinguish between connections less and connection oriented protocols. [8+8]

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Code No: 07A60401 **R07** **Set No. 3**

III B.Tech II Semester Examinations,December 2010
TELECOMMUNICATION SWITCHING SYSTEMS
Electronics And Communication Engineering

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

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) What is the draw back of point to point telephone network? How is it eliminated?
   (b) With the help of suitable diagram explain the principle of operation of cross bar switch. [8+8]
2. What are the three forms of signaling used in telecommunication Network? Explain. [16]
3. Explain the subscriber loop system in detail. [16]
4. (a) Explain the functions of Front-end Processor
   (b) What is LCU? Draw Internal Block diagram of LCU and explain its Operation. [8+8]
5. Write a note on time multiplexed time switching. [16]
6. (a) Explain Digital Subscribe Line (DSL). Technology.
   (b) What is DMT? Explain. [8+8]
7. (a) Explain the function of NT_I, NT_2, and TE_1 & TE_2. Functional groupings related to ISDN.
   (b) What is the relationship between ISDN layers and OSI layers? [8+8]
8. Explain the operation of transparent bridge? How do you eliminate its draw backs? [16]

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