

Code No: 57040

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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech IV Year I Semester Examinations, May/June - 2015

TELECOMMUNICATION SWITCHING SYSTEMS

(Electronics and Communication Engineering)

Time: 3 Hours

Max. Marks: 75

Answer any Five Questions
All Questions Carry Equal Marks

- 1.a) Explain about the various elements of switching systems.
- b) Discuss the advantages of electronic switching over manual switching.
- c) What is diagonal cross point matrix? What are its merits? [5+5+5]
- 2.a) Define blocking probability and explain why it is called as time congestion.
- b) What are the charges for telephone call of 1, 3 and 5 minute durations on BSNL telephone network, from Warangal to Hyderabad which are separated by a radial distance of 312 km. Determine these values for peak hours and off peak hours?
- c) Write short notes on: i) Peak busy hour ii) Traffic intensity. [5+5+5]
- 3.a) What is the purpose of multi stage network? Discuss about three stage network and its applications.
- b) An exchange is designed to handle 2000 calls during the busy hour. One day, the number of calls during the busy hour is 2200. What is the resulting GOS? [7+8]
- 4.a) Explain the operation of input controlled and output controlled time division space switch with the help neat sketches.
- b) Describe the four configurations of time multiplexed time switch. [8+7]
- 5.a) Describe the control functions in a Switching System.
- b) What is centralized stored program control? Explain in detail. [7+8]
6. Compare the following signaling techniques.
 - a) In - channel and common channel signaling.
 - b) In - band and out - band signaling.
 - c) Channel associated and channel non associated signaling. [5+5+5]
- 7.a) Compare of bus and ring networks.
- b) Explain any one optical Fiber network.
- c) Describe ATM switch. [5+5+5]
- 8.a) Describe bearer, tele and supplementary services of ISDN.
- b) Explain in detail the charging plan for Telecommunication Networks. [8+7]

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