

SS**Code: 07A60401**

B.Tech III Year I Semester (R09) Supplementary Examinations December 2015

TELECOMMUNICATION SWITCHING SYSTEMS

(Electronics and Communication Engineering)

Time: 3 hours

Max Marks: 70

Answer any FIVE questions

All questions carry equal marks

- 1 (a) Compare the features of single stage and multistage switching network configurations.
(b) If the signal input to an amplifier is 0 dBm, what is the power output in MW if the gain of the amplifier is 20dB?
- 2 (a) Calculate the number of trunks that can be supported on a time multiplexed space switch, given that:
(i) 32 channels are multiplexed in each stream.
(ii) Control memory access time 100ns.
(iii) Bus switching and transfer time is 100 ns per transfer.
(b) What are the limitations of time multiplexed space switches?
- 3 Explain the modeling of switching systems and delay systems.
- 4 (a) Explain in detail the charging plan for telecommunication networks.
(b) The traffic statistics of a company using a PABX indication that 180 outgoing calls are initiated every hour during working hours. Equal number of calls comes in. each call lasts for 200 seconds on the average. If the GOS required is 0.05, determine the number of lines required between the PABX and the main exchange.
- 5 (a) Describe the advantages of using layered network architecture.
(b) What are the characteristics of network interface card?
- 6 (a) What is a virtual circuit network? Explain the characteristics of virtual circuit network.
(b) What is a repeater? How it is different from a gateway?
- 7 (a) Write about numbering plan for ISDN.
(b) Give at least three applications of the H-channel.
- 8 Write short note on:
(a) ADSL
(b) HFC Networks
(c) STS Multiplexing
(d) Virtual Tributaries.
