Code No: 57040

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech IV Year I Semester Examinations, February/March - 2016
TELECOMMUNICATION SWITCHING SYSTEMS
(Electronics and Communication Engineering)

Time: 3 Hours   Max. Marks: 75

Answer any Five Questions
All Questions Carry Equal Marks

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1.a) Discuss about functions of a Switching System.
 b) Explain about Cross-point Technology.
 c) What is the operation of Reed relay cross point?   [5+5+5]

2.a) Explain about LCR model.
 b) Briefly discuss Delay model.   [7+8]

3.a) Write about on Grade of service (GOS).
 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+7]

4.a) Explain the memory controlled time division space switch with the help of a block diagram.
 b) 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.   [8+7]

5.a) Discuss about common control switching system with the help of a block diagram.
 b) Distinguish between input controlled and output controlled switch. How is it Different from memory controlled switch?   [8+7]

6.a) Compare the following signalling techniques.
    i) In – channel and common channel signalling.
    ii) In – band and out – band signalling.
    iii) Channel associated and channel non associated signalling.
 b) Explain about Data Link Control Protocol.   [8+7]

7.a) Describe the operation of star, bus, ring network topologies.
 b) Discuss about i) Flow control   ii) ATM Switches.   [8+7]

8.a) What are the categories of Services Provided by ISDN? Explain.
 b) Discuss in detail about any one intelligent network.
 c) Briefly explain about automatic alternative routing.   [5+5+5]

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