Code No:**R164104B** **R16** **Set No. 1**

IV B.Tech I Semester Supplementary Examinations, February- 2020

ELECTRONIC SWITCHING SYSTEMS

(Electronics and Communication Engineering)

Time: 3 hours **Max. Marks: 70**

Question paper consists of Part-A and Part-B
Answer ALL sub questions from Part-A
Answer any FOUR questions from Part-B

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PART–A *(14 Marks)*

1. a) Give the classification of switching systems. [2]
   b) Calculate the unavailability for single and dual processor systems with MTBF=2000hrs and MTTR=4hrs. [3]
   c) Mention the difference between time switching and space switching. [3]
   d) Differentiate channel signaling and common channel signaling. [2]
   e) Define average holding time and call completion rate. [2]
   f) Distinguish FAX and E-mail. [2]

PART–B *(4x14 = 56 Marks)*

2. a) What are the different features in between common to manual switching and electronic switching? List and explain. [7]
   b) Write a brief notes on crossbar systems with a neat diagrams. [7]

3. a) Define stored program control? Draw and explain organization of a distributed SPC. [7]
   b) What are the different" enhanced services" offered by the electronic exchange? List and explain their categories. [7]

4. a) Explain the operation of Time Multiplexed Time division space Switch with a neat block diagram. [7]
   b) Draw the block diagram for a space time space switch and explain various functional entities. [7]

5. a) Draw and explain block schematic diagram of CCITT signaling system no.7. [7]
   b) Explain the terms in-band signaling and out-band signaling with neat diagrams. [7]

6. a) Write a brief note on applications of a grading in a telecommunication switching network. [7]
   b) State and explain techniques of traffic analysis. What are the performance measures for these systems? [7]

7. a) List and explain some of the new services involved in ISDN. [7]
   b) What are the different factors responsible for the developments towards ISDN and explain them briefly. [7]

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