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

IV B.Tech I Semester Regular/Supplementary Examinations, Jan/Feb - 2022

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) What is meant by telecommunication network? [2]
   b) Compare Standby mode and Synchronous duplex mode. [3]
   c) What is the use of multiplexing? List the various multiplexing techniques. [3]
   d) What is In band and Out band Signaling? [2]
   e) Define the term busy hour. [2]
   f) List the types of ISDN [2]

PART–B *(4x14 = 56 Marks)*

2. a) Explain various switching techniques in computer communication. [7]
   b) What is DTMF signaling? Draw and describe the layout of DTMF keypad. [7]

3. a) What is input controlled time division space switch? Explain how this enhances the Performance. [7]
   b) What are the main classes of application software? Explain [7]

4. a) What are the features of Time Multiplexed Time division space Switch? Explain. [7]
   b) Explain a three stage switching (general) with neat diagram [7]

5. a) What are the three ways of implementing CCS? Explain each types of signaling with neat diagrams. [7]
   b) Explain the terms topology and access methods used in LANs. [7]

6. a) During busy hour, 1200 calls were offered to a group of trunks and 6 calls were lost. The average call duration (holding time) was 3 minutes. Find (i) traffic offered (ii) traffic lost (iii) traffic carried (iv) grade of service [7]
   b) Discuss about Link systems. [7]

7. a) Explain the concept of ISDN with neat diagram [7]
   b) Discuss about Expert Systems in ISDN [7]