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B TECH
(SEM-VIII) THEORY EXAMINATION 2018-19
ELECTRONIC SWITCHING

Time: 3 Hours**Total Marks: 100****Note: 1.** Attempt all Sections. If require any missing data; then choose suitably.**SECTION A**

- 1. Attempt all questions in brief. 2 x 10 = 20**
- a. Enlist the component of telecommunication networks.
 - b. What are the various factors that affect subscriber loop length?
 - c. How cost of a switching system is calculated?
 - d. What is switching capacity of a system?
 - e. Which generalized model is used for studying queuing?
 - f. State various characteristics of queuing.
 - g. How Availability for a single processor SPC is defined?
 - h. Enlist different types of signaling.
 - i. What is the use of I-Frames?
 - j. What is statistical multiplexing?

SECTION B

- 2. Attempt any three of the following: 10x3=30**
- a. What is switching system? With the help of diagram explain various elements of switching system.
 - b. What are various design parameters of a switching system, explain each in detail?
 - c. Explain following:
 - (i) Markov Process
 - (ii) Birth death process
 - d. Describe three level processing of distributed SPC.
 - e. Draw and explain TCP/IP reference model

SECTION C

- 3. Attempt any one part of the following: 10x1=10**
- a. Write short note on:
 - (i) Reed relay switch
 - (ii) general trunking diagram
 - b. Explain Strowger step by step system. Also write limitations of Strowger switching system.
- 4. Attempt any one part of the following: 10x1=10**
- a. Explain three stage combination switching:
 - (i) TST switching
 - (ii) STS switching
 - b. Explain non blocking switches and number of cross points for three stage switch.

5. Attempt any *one* part of the following: **10x1=10**

- a. Write a note on following:
(i) traffic intensity
(ii) Blocking probability
- b. Over a 20 minutes' observation interval, 40 subscriber initiate calls. Total duration of the calls is 4800 seconds. Calculate the load offered to the network by the subscriber and average subscriber traffic.

6. Attempt any *one* part of the following: **10x1=10**

- a. Explain In channel signaling (ICS). Also explain its types.
- b. Explain different modes of dual processor architecture.

7. Attempt any *one* part of the following: **10x1=10**

- a. Write a note on following:
(i) synchronous TDM
(ii) asynchronous TDM
- b. Explain different means of flow control.

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