Printed Pages:2 **Sub Code:NEC041**

Paper Id: 131264 **Roll No.** | | | | | | | | | | |

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, 40subscriber 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.