PAPER ID-420806

Roll No:

BTECH
(SEM VIII) THEORY EXAMINATION 2021-22
ELECTRONIC SWITCHING

Time: 3 Hours   *Total Marks: 70*
Note: **1.** Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1.	**Attempt *all* questions in brief.**	**2 x 7 = 14**

a.	Define the basic function of uniselector.
b.	What do you mean by out-band signaling?
c.	Define blocking criteria of telecommunication system.
d.	Define GOS.
e.	Compare loss system and delay system.
f.	Define reliability and availability.
g.	What do you understand by ATM?

SECTION B

2.	**Attempt any *three* of the following:**	**7 x 3 = 21**

a.	Discuss the evolution of digital switching system. Explain the block diagram of subscriber's line interface circuit for a digital exchange.
b.	Differentiate between single and multiple stage switching networks. Discuss the blocking conditions of two stage network.

c.	Write a note on following:
	  i Traffic intensity
	  ii Blocking probability

d.	What do you mean by common channel signaling? Discuss its advantages and disadvantages.
e.	What is ATM switching? How is it different from TDM circuit switch?

SECTION C

3.	**Attempt any *one* part of the following:**	**7 x 1 = 7**

(a)	Draw the block diagram showing the organization of crossbar exchange and explain its operation.
(b)	Give the classification of switching techniques used in PSTN and explain in brief. Differentiate between common control and direct control.

4.	**Attempt any *one* part of the following:**	**7 x 1 = 7**

(a)	What do you understand by Automatic Switching System? Explain Space Division and Time Division Switching.
(b)	What do you mean by echo? Explain the operation of echo suppressors or cancellers? Where is it used?

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5. **Attempt any *one* part of the following:** **7 x 1 = 7**

(a)	What do you mean by delay system? Discuss the various element of queuing system.
(b)	How many time slot interchange modules are needed for an STS switch with 128 primary TDM signal 30 voice channel per input? Assume blocking tobe less than 0.002 and the loading is 0.2 Erlang per channel and determine the complexity of the switch.

6. **Attempt any *one* part of the following:** **7 x 1 = 7**

(a)	Explain different modes of dual processor architecture.
(b)	How the stored program control concept is being used in electronic switching system?

7. **Attempt any *one* part of the following:** **7 x 1 = 7**

(a)	Draw and explain TCP/IP reference model.
(b)	Explain the memory space memory switch. Draw 8×8 banyan switch network.