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SEAT No._____

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Sardar Patel University
M.Sc. (Electronics & Communication) (Semester-IV) Examination April 2018
Day & Date: 16-04-2018, Monday
Time: 2:00 to 5:00 pm
Subject: Telecommunication Switching System
Paper No. PS04CELC03

Instructions: Marks: 70
Figures to the right indicate marks.

Q-1 Multiple Choice Questions: [8]

1. If all the inlets and outlets of the network are connected to the subscriber lines, the network is then called a _____.
   a) Symmetric network b) Asymmetric network
   c) non symmetric network c) Folded network

2. _____ data transmission means that data can be transmitted in both directions on a signal carrier, but not at the same time
   a) Half duplex b) Full duplex
   c) simplex c) none

3. In a _____ network, the terminals and nodes are interconnected in such a way that any unused input-output pair can be connected by a path through unused nodes.
   a) Non blocking b) folded
   c) blocking c) symmetric

4. Strowger switching system is the _____ control system.
   a) direct b) indirect
   c) semi direct d)both a & b

5. The traffic in telecommunication network is measured in _____.
   a) ccs b) erlang
   c) cm d)All of above

6. The ratio of successfully completed calls to the total number of attempted calls is called as _____.
   a) busy hour call attempt b) call completion rate
   c) busy hour d) peak busy hour

7. _____ determines the routes for the call through the network and also determines the charging method.
   a) line unit b) initial translator
   c) register finder d) final translator

8. In a communications system, the sliding 60-minute period during which occurs the maximum total traffic load in a given 24-hour period is called as _____.
   a) busy hour call attempt b) call completion rate
   c) busy hour d) peak busy hour

P.T.O

Q-2 Answer in short. (Any SEVEN) [14]

1. Define blocking probability.
2. What are the drawbacks of rotary dial telephone?
3. Define Busy hour and Peak busy hour.
4. Give the difference between Time Division Time Switching and Time Multiplexed Space Switching.
5. Give the procedure for establishing connection of crossbar switch.
6. Explain Busy hour Call Attempt.
7. What is the difference between grade of service and blocking probability?
8. Give the classification of switching system.
9. Explain day to busy hour traffic ratio.

Q-3 (a) Explain Rotary Dial Telephone in detail (6)

(b) Write a short note on Step by step switching with necessary diagram. (6)

OR

(b) Explain different signaling function (tones) in detail. (6)

Q-4 (a) Explain block diagram of common control switching system. (6)

(b) Write a short note on Touch Tone Dial Telephone. (6)

OR

(b) Describe the design consideration for touch tone signaling system. (6)

Q-5 (a) Describe in detail time division time switching. (6)

(b) Write a short note on Distributed SPC. (6)

OR

(b) Write a short note on Time Multiplexed Space Switching. (6)

Q-6 (a) Explain network traffic load and their parameters in detail. (6)

(b) Write a short note on Modeling Switching Systems. (6)

OR

(b) Explain blocking models and loss estimates. (6)