Code: 13A04605

B.Tech IV Year I Semester (R13) Supplementary Examinations June 2017
TELECOMMUNICATION SWITCHING NETWORKS
(Electronics & Communication Engineering)

Time: 3 hours   Max. Marks: 70

PART – A
(Compulsory Question)
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1   Answer the following: (10 X 02 = 20 Marks)
   (a) What are SONET rings?
   (b) Define the term multiplexing.
   (c) List out the applications of time division switching.
   (d) What are the salient features of STS switching.
   (e) What do you understand by network management?
   (f) Define the term 'Phase — locked Loop'.
   (g) Explain about digital subscriber access.
   (h) What is the need of ISDN?
   (i) What is the concept involved in "Exponential Service times'.
   (j) What are the delay systems?

PART – B
(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

2   With a neat diagram, explain the operating principle, advantages and applications of FDM multiplexing
        and modulation.
OR
3   Discuss in detail about the SONET frame formats and SONET administration and maintenance.

UNIT – II

4   Explain in detail about space division switching and TST switching.
OR
5   Discuss in detail about Digital Switching in an analog environment.

UNIT – III

6   Explain in detail about Jitter measurements and systematic Jitter.
OR
7   Discuss in detail about U.S. Network synchronization.

UNIT – IV

8   With a neat block diagram, explain the need and operation of Integrated Digital Loop Carrier Systems.
OR
9   Draw the architecture of ISDN basic rate access and explain about it.

UNIT – V

10   Describe the concept involved in holding time distributions.
OR
11   Discuss in detail about Network blocking probabilities.

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