Code No: 118EW

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech IV Year II Semester Examinations, May - 2017
TELECOMMUNICATION SWITCHING SYSTEMS AND NETWORKS
(Electronics and Communication Engineering)

Time: 3 hours

Max. Marks: 75

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions

PART A

(25 Marks)

1.a)	Draw the basic telecommunication switching network and list its components.	[2]
b)	Briefly explain traffic performance.	[3]
c)	What is Time Division Switching?	[2]
d)	What is use of State Transition Diagrams for switching networks?	[3]
e)	Briefly explain the Signaling Information Field.	[2]
f)	What is Signal Units? Explain briefly.	[3]
g)	Explain basic principle of packet switching.	[2]
h)	Briefly explain Ring Networks and its list applications.	[3]
i)	Explain the basic principle of Integrated Digital Networks.	[2]
j)	What is Charging in telecommunication networks?	[3]

PART B

(50 Marks)

2.a)	Explain basics of Switching System.	
b)	Briefly explain Functions of a telecommunication Switching System.	[5+5]
	OR	
3.a)	Describe differences between electronic Switching and digital switching.	
b)	What is Queues in Tandem? Explain Delay Tables and list applications	[5+5]
4.a)	Distinguish between Two Stage Networks and Three Stage Networks.	
b)	Explain basic Time Division Time Switching with required diagrams	[5+5]
	OR	
5.a)	Explain Time Multiplexed Space Switching, and list its applications.	
b)	Describe the terms Common Control, Reliability, Availability and Security.	[5+5]
6.a)	Explain FDM Carrier Systems with suitable diagram.	
b)	Discuss various features and applications of PCM Signaling.	[5+5]
	OR	
7.a)	Write differences between Outband signaling and Inband signaling.	
b)	Explain Inter Register Signaling with the help of an application.	[5+5]

8.a) Describe Datagrams and Virtual Circuits with suitable diagram and applications.
 b) Explain the terms (i) Routing (ii) Flow Control related to switching networks.   [5+5]

OR

9.a) Explain the basic principle and applications of the Asynchronous Transfer Mode.
 b) Compare Bus and Ring Networks along with diagrams.   [5+5]

10.a) Briefly explain Integrated Services Digital Networks.
 b) Describe Intelligent Networks with its applications.   [5+5]

OR

11.a) Explain the differences between Integrated Digital Networks and Integrated Services Digital Networks.
 b) Write short notes on Analog Networks.   [5+5]

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