328848(28)

B. E. (Eighth Semester) Examination,

Nov-Dec 2021

(New Scheme)

(Et.&T Engg. Branch)

TELECOMMUNICATION SWITCHING CIRCUITS and NETWORKS

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

Note : *Attempt all questions. Part (a) of each question is compulsory and carrying 2 marks each and attempt **two** parts from (b), (c) and (d) carrying 7 marks each.*

1. (a) What do you mean by Link and Trunk?   2

   (b) Discuss in detail strowger switching system.   7

(c) Explain cross-bar switching and its configurations.   7

(d) Differentiate between centralised SPC and distributed SPC.   7

2. (a) What is MDR and MAR?   2

   (b) Explain two dimensional degital switching.   7

   (c) Compare and contrast early electronic switching system and popular digital switching system.   7

   (d) How does call processing take place? Discuss with example.   7

3. (a) Draw typical telephone traffic pattern on a working day.   2

   (b) Define BHCA and BHCR. An exchange serves 2000 subscribers. If the average BHCA is 10,000 and the CCR is 60%. Calculate the busy hour calling rate.   7

   (c) What is In-channel signaling? Discuss it in detail.   7

   (d) Write a note on subscriber loop system.   7

4. (a) What is SONET and where it is used?   2

   (b) Depict by means of a tree structured diagram the different classes of data network.   7

(c) Discuss the role of link-to-link and end to end layers in data communication with example. 7

(d) List the different switching systems available and discuss in detail circuit switching system. 7

5. (a) List down the new services supported by ISDN. 2

(b) Comment on the structures of standards for PDN and ISDN. 7

(c) What makes ISDN signalling flexible? How packet switched network is more suitable than circuit switched network for ISDN. 7

(d) Distinguish between user level and network level signalling in ISDN. 7