328848(28)

APR-MAY2022

B. E. (Eighth Semester) Examination, ~~2020~~

(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. In each question Part (a) is compulsory and from remaining you have to attempt any two parts (b), (c) & (d).

Unit-I

1. (a) Define folded network and state the condition for which folded network becomes non-blocking network.   2

(b) Explain uniselector and two motion selector in brief. 7

(c) What do you mean by stored program control? Explain its types in brief. 7

(d) Given that MTBF = 2000 hrs. and MTTR = 4 hrs. Calculate the unavailability for single and dual processor system for 10 years and 30 years. 7

Unit-II

2. (a) Define TDM. 2

(b) Explain time division switching and its types in brief. 7

(c) Explain software organization of computer controlled switching system. 7

(d) Explain early electronic switching system in brief. 7

Unit-III

3. (a) Define Grade of Service (GoS).. 2

(b) Explain subscriber loop system with neat sketch. 7

(c) Explain numbering plan in brief. 7

(d) Explain In-channel signalling in brief. 7

Unit-IV

4. (a) Define MODEM. 2

(b) Explain different types of switching techniques for data transmission in brief. 7

(c) Explain with suitable diagram Link to Link layer communication. 7

(d) Write short note on : (any one) 7

   (i) Satellite based data network

   (ii) ISO-OSI architecture

Unit-V

5. (a) Define ISDN. 2

(b) Explain user level signalling and network level signalling in brief. 7

(c) Explain numbering and addressing scheme of ISDN in brief. 7

(d) Write short notes on : (any **two**)   7

    (i)   ISDN standards

    (ii) Teleservices

    (iii) Electronic Mail