Regulation R18 *Subject code:* **2O6FB**

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A' Grade)

B.Tech VI Semester Supplementary Examinations, June/July 2023

TELECOMMUNICATION SWITCHING SYSTEM & NETWORKS
(INFORMATION TECHNOLOGY)

Maximum Marks: 70 Date:05.07.2023 Duration: 3 hours

Note: **1.This question paper contains two parts A and B.**
2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
3. Part B consists of 5 Units. Answer any one full question from each unit which carries 10M.
4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks (10x2M=20 Marks)

1 Define Grade of Service (GOS).
2 What is the difference between single and multistage network?
3 What are the features of SPC ?
4 What are the stages of switching networks?
5 What do you mean by customer line signalling?
6 Define Congestion.
7 Write different types of topology?
8 What is the difference between local area and wide area networks?
9 Write about broadband networks.
10 Define ISDN?

Part-B

Answer All the following questions. (5X10M=50Marks)

11 Explain in detail about elements of switching system with neat diagram. (10)

OR

12 During the busy hour, 1200 calls were offered to a group of trunks and six calls were lost. The average call duration was 3 minutes. Find: (10)
(i) The traffic offered (ii) The traffic carried
(iii) The traffic lost (iv) The grade of service

13 Describe the terms Common Control, Reliability, Availability and Security. (10)

OR

14 What is time multiplexed space switching? With a neat diagram explain its operation. (10)

15 Explain different topologies of Data Communication Networks. (10)

OR

16 Explain the Architecture of SS7. (10)

17 Compare Bus and Ring Networks along with diagrams. (10)

OR

18 A. Explain the principle of operation of packet Switching Network with example. (5)

B. Explain the terms (i) Routing (ii) Flow control related to switching networks. (5)

19 Explain ISDN interfaces and protocol architecture in detail. (10)

OR

20 A. Explain the telecommunication networks. (5)

B. Explain briefly on numbering plan? (5)