Transmission, Switching & Signaling

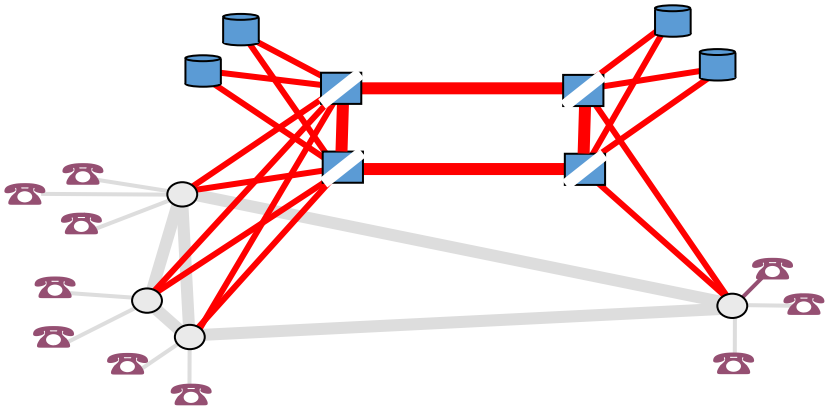
BS-Telecom
26 – 06 – 2020
9:00 am to 3:00 pm (6 Hours)

Q. No. 1 Define Multiplexing. What are the types of Multiplexing, Explain in detail? **(10)**

Q. No. 2 VOIP. Explain w.r.t basic functions, VOIP components. Also explain how to overcome the challenges. What is the role of FXO and FXC in VOIP? **(10)**

Q. No. 3 What is PDH? Name some of its limitations and advantages of SDH/SONET. Show the path section designation for SDH. Also show the SDH Frame and calculate its basic capacity for a byte and frame. **(10)**

Q. No. 4
A. Difference between in-band and channel associated signaling. **(10)**
B. Draw the SS7 protocol stack. Show and brief the signaling unit structure of MSU
C. In a telephone signaling network (SS7), show the step by step signaling messages in order to establish a particular PSTN call



Q. No. 5. We need a three-stage space division switch with N=100. We use 10 crossbars at first stage and 4 crossbars at middle stage. **(10)**
A. Show configuration diagram
B. Calculate the total no. of cross-points
C. Find the possible number of simultaneous connections
D. If we increase the number of inputs and outputs to 1000, calculate the total number of cross-points using a multistage switch using Clos criteria.