UN IT – IV

MULTIPLE ACCESS TECHNIQUES

PART-A

1. List any four primary applications of FDM. **(BT-1)**

2. Explain about CDMA. **(BT-4)**

3. Define Guard band. **(BT-1)**

4. List out the merits of TDMA system. **(BT-1)**

5. Generalize the significance of CDMA techniques. **(BT-6)**

6. Give out the merits of FDMA system. **(BT-2)**

7. Describe near –far problem. **(BT-2)**

8. Illustrate the popular coding sequences of CDMA system. **(BT-3)**

9. Define multiple access. **(BT-1)**

10. Demonstrate the working principle of SDMA. **(BT-3)**

11. Describe the role of modem in communication networks. **(BT-1)**

12. Illustrate the frame structure of a T1 carrier system**. (BT-3)**

13. Compare SDMA with CDMA**. (BT-4)**

14. Explain about the working principle of TDMA. **(BT-4)**

15. Describe briefly about FDMA. **(BT-2)**

16. Summarize the significance of T1 carrier system in communication networks with an

17. Compare time division multiplexing and frequency division multiplexing.

18. Generalize the advantages of SDMA technique.

19. Describe about T carrier.

20. Give the advantage of CDMA system**.**

PART – B

1 500 users employ FDMA to transmit 1000-bit packets of data. The channel band width is 100MHz and QPSK is used at each of the 5000 carrier frequencies employed

    (i)   What is the maximum bandwidth allocated to each user?   **(5)**

    (ii)   What is the bit rate employed by each user?   **(6)**

    (iii)   How long does it take to transmit a packet?   **(BT-6)**   **(6)**

2 Describe briefly about the operation of a typical TDMA system with the time pattern. **(BT-1)**   **(16)**

3 Explain the principle of FDMA with diagram. **(BT-4)**   **(16)**

4 Describe CDMA technique in detail. **(BT-1)**   **(16)**

5 Discuss TDMA technique in detail and compare it with FDMA. **(BT-1)**   **(16)**

6 Compare various multiple access techniques used in wireless communication with their merits and demerits. **(BT-5)**   **(16)**

7 Explain with a neat block diagram the SDMA technique **(BT-4)**   **(16)**

8 Illustrate how interference is avoided by using code division multiplexing. **(BT-3)**   **(16)**

9 Describe briefly about wired and wireless communication systems. **(BT-2)**   **(16)**

10 Discuss the BSC and BEC with their channel diagram and transition matrix **(BT-2)**   **(16)**