SATHYABAMA UNIVERSITY

(Established under section 3 of UGC Act, 1956)

Course & Branch: B.Tech - IT
Title of the paper: Telecommunication Systems
Semester: V Max. Marks: 80
Sub.Code: 12505(2002/2003/2004/2005) Time: 3 Hours
Date: 17-11-2007 Session: FN

PART – A (10 x 2 = 20)

Answer All the Questions

1. Suggest two reasons for using a directional antenna.

2. Calculate the length of a half – wave dipole for an operating frequency of 200MHZ.

3. What are the advantages of optical fiber cables?

4. Define critical angle.

5. Why CDMA is sometimes referred to as spread-spectrum multiples access?

6. What is meant by electronic navigation?

7. List the advantages of a digital cellular system.

8. Define the term false handoff.

9. Why is it unnecessary for cell phones and cellular base station transmitters to use linear RF power amplifier in their transmitters?

10. What are micro cells?

PART – B (5 x 12 = 60)

Answer All the Questions

11. Explain any three types of antenna.

(or)

12. (a) Discuss about calculating the SWR of a transmission line.
    (b) Describe the two types of transmission lines.

13. Explain in detail about the different types of optical fiber along with their advantages and disadvantages.

(or)

14. (a) Explain an ILD transmitter.
    (b) Write short notes on photodiode fiber optic receiver.

15. What are the advantages of CDMA as compared with TDMA and FDMA? And describe the operation of a CDMA.

(or)

16. Explain the three segments of a Navstar GPS radio navigation system.

17. (a) Explain ISDN architecture with a neat diagram.
    (b) Briefly explain how a paging system operates.

(or)

18. Explain the processing of a cellular telephone call.

19. How the AMPS cellular system keeps track of phones and calls? Explain in detail.

(or)

20. Explain Fax and Data communication using Digital Cellular phones.