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Reg. No. : .....

Name : .....

Seventh Semester B.Tech. Degree Examination, November 2015
(2008 Scheme)
08.704 Elective – III (a) : ELECTRONIC COMMUNICATION (E)

Time : 3 Hours Max. Marks : 100

PART – A

Answer **all** questions : **(10×4=40 Marks)**

1. A carrier wave of frequency 10 MHz and peak value 10 V is amplitude modulated by a 5 KHz sine wave of amplitude 6 V. Determine the modulation index and draw the amplitude spectrum.

2. Draw the block diagram and explain briefly the phase shift method for SSB generation.

3. What is Carson's rule ?

4. Compare AM and FM.

5. Explain the basic principles of PCM.

6. What is interlaced scanning ?

7. Write short notes on HDTV.

8. What is cell sectoring ?

9. Draw the cell system layout of a cellular telephone system.

10. Explain the concept of frequency reuse.

P.T.O.

PART – B

Module – I

11. a) With the aid of circuit diagram and waveforms, explain the theory of BJT collector modulation. 10

    b) Draw the block diagram of a superheterodyne receiver and explain the function of each block. 10

OR

12. a) Explain the Armstrong method for FM generation. 10

    b) Describe the working of Foster-Seeky discriminator circuit. 10

Module – II

13. a) State sampling theorem. 4

    b) Draw the composite TV video signal at the end of an odd field. 6

    c) With the help of a sketch, explain the working of a picture tube. 10

OR

14. a) Draw the block diagram of a monochrome TV receiver. Explain. 12

    b) Write short notes on :

        i) Quantization. 4

        ii) Synchronization in TV. 4

Module – III

15. a) Draw the block diagram of a GSM system and explain its architecture. 12

    b) What are the services provided by GSM ? 8

OR

16. a) Explain the basic concept of CDMA. 10

    b) Give an overview of personal communication satellite system. 10
