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Reg. No. : .....

Name : .....

Fourth Semester B.Tech. Degree Examination, May 2014
(2008 Scheme)
Branch : ELECTRONICS AND COMMUNICATION
08.406 : Analog Communication (T)

Time: 3 Hours Max. Marks: 100

PART – A

Answer **all** questions. **Each** question carries **4** marks :

1. Explain the term double spotting.
2. Compare PAM, PPM and PWM.
3. Explain burse noise and avalanche noise.
4. A 360 W carrier is simultaneously modulated by two audio waves with modulation percentage of 55 and 65 respectively. What is the total side band power radiated ?
5. Draw the functional block diagram of a electronic telephone set.
6. Explain the concept of normalized transmission bandwidth.
7. For an FM modulator with a peak frequency deviation of 10kHz, modulating signal frequency of 10kHz and a carrier frequency of 500kHz, determine the band width.
8. What is three point tracking ? Explain.
9. For an electronic device operating at a temperature of 17°C with a bandwidth of 10kHz, determine the thermal noise power in watts.
10. What is meant by the term interleaving of L and R signals in stereo transmitter ?

(10×4=40 Marks)

P.T.O.

PART – B

Answer **any two** questions from **each** Module. **Each** question carries **10** marks :

Module – I

11. Describe the operation of the third method of SSB transmitter.

12. a) Describe the differences between a coherent and a non-coherent radio receiver.

    b) For an AM superheterodyne receiver with IF, RF and local oscillator frequency of 455 kHz, 600 kHz and 1055 kHz respectively. Determine image frequency and image frequency rejection ratio for a Q of 100.

13. Draw the block diagram for an AM superheterodyne receiver and describe its operation and the primary functions of each stage.

Module – II

14. Draw the block diagram for a Crosby direct FM transmitter and describe its operation.

15. Draw the schematic diagram for a quadrature FM demodulator and describe its operation.

16. a) Draw the block diagram of FM stereo transmitter and explain.

    b) Draw the amplitude limiter response characteristics.

Module – III

17. Briefly describe how a paging system operates with block diagram.

18. a) Explain the concept of local central office telephone exchange.

    b) Explain threshold effect in angle modulation.

19. Obtain the expression for output SNR of a AM receiver. **(6×10=60 Marks)**