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Reg. No. : .....

Name : .....

Fourth Semester B.Tech. Degree Examination, July 2015
(2008 Scheme)
08.406 : ANALOG COMMUNICATION (T)

Time : 3 Hours Max. Marks : 100

PART – A

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

1. Explain the operation of an AM detector.
2. Explain keyed AGC and delayed AGC.
3. Compare AM with FM.
4. For an AM super heterodyne receiver with IF, RF and local oscillator frequency of 455 KHz, 600 KHz and 1055 KHz respectively. Determine the image frequency.
5. Explain pre-emphasis and de-emphasis.
6. Explain the function of amplitude limiter in FM receiver.
7. Explain the term interleaving of L and R signals in stereo transmitter.
8. Distinguish between ringing tone, dial tone and busy tone in telephony.
9. Explain the operation of local subscriber loop.
10. An electronic device is operating at a temperature of 30° C with a bandwidth of 20 KHz. Determine the thermal noise power in watts. **(10×4=40 Marks)**

P.T.O.

PART – B

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

Module – I

11. What is meant by amplitude modulation ? Derive the expression for power of an AM signal.

12. Explain the principle of a balanced modulator. Show that output of balanced modulator consists of sum and difference of the two input frequencies.

13. Explain the operation of PWM modulator and demodulator.

Module – II

14. Explain the block diagram of indirect method of FM generation.

15. a) Explain the operation of foster seeley discriminator.
    b) How it is different from balanced slope detector ?

16. Explain the block diagram of an FM receiver.

Module – III

17. Explain different types of noise in communication system.

18. Explain the effect of noise in DSBSC.

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