Total No. of printed pages = 3

Et-501/CE-II/5th Sem/ETC/2017/M

COMMUNICATION ENGINEERING – II

Full Marks – 70

Pass Marks – 28

Time – Three hours

The figures in the margin indicate full marks for the questions.

Answer any *five* questions.

1. (a) Draw the circuit diagram of a Foster Seeley discriminator and explain its principle of operation. 8

   (b) Explain how modulating signal can be detected from an AM signal using a practical linear diode detector circuit. 6

2. What is noise ? How is it classified ? Explain the different types of noise found in communication receivers. 3+7+4=14

[Turn over

3. (a) Differentiate between AM and FM systems. 6

(b) Explain the working principles of an AM transmitter with the help of a suitable block diagram. 8

4. Explain PAM, PWM, PPM and PCM with proper waveform diagram. 14

5. Draw the block diagram of an SSB transmitter and explain its working principle. 7+7=14

6. Draw the block diagram of a PCM transmitter and receiver. Also explain how an analog signal is connected to PCM signal and retrieved back. 7+4+3=14

7. (a) With the help of a diagram, explain the working principle of an FM superheterodyne receiver. 10

(b) State the advantages of superheterodyne receivers over TRF receivers. 4

8. Draw the block diagram of a space diversity receiving system and explain how it can be used to overcome fading. 6+8=14

9. Write notes on any *two* : 7+7=14

(a) ASK, FSK and PSK

(b) TDM and FDM

(c) Pre-emphasis and de-emphasis.