

## Question Bank (G scheme)

Name of subject: PRINCIPALS OF COMMUNICATION SYSTEM

Unit Test :I

Subject code: 17472

Course : IE

Semester: IV

### CHAPTER 1

#### Fundamentals of Electronic Communication (18marks)

##### 3 marks question

1. Calculate modulation index of AM signal if maximum amplitude  $V_{max} = 20\text{mV}$  and minimum amplitude  $V_{min} = 15\text{mV}$ .
2. Define FM with Waveform.
3. What is modulation? State its needs.
4. Draw the frequency spectrum of AM .
5. Explain the generation of FM using varactor diode method .

##### 4marks question

6. Comparison between Am and FM.
7. Draw and explain block diagram of basic communication system .
8. Explain electromagnetic spectrum .
9. Explain different sources of noise .
10. Define the following (a)noise factor (b)signal to noise ratio
11. Compare PAM, PWM and PPM)
12. State the sampling theorem and nyquist criteria .

### CHAPTER 2

#### Digital communication (24 marks)

##### 3 marks question

13. Differentiate ASK,FSK and PSK.
14. Explain FDM along with its block diagram .
15. Explain TDM along with its block diagram .
16. Encode the following binary data streams into RZ, NRZ and Manchester code 11000010 .

##### 4marks question

17. Explain FSK along with the block digram.
18. Explain Adaptive delta modulation technique along with two advantages.
19. What is QPSK. Explain with block diagram.
20. Write short notes on (a)unipolar RZ (b)split phase Manchester format.
21. Draw block diagram of PCM along with its application. write two applications of PCM .

### **CHAPTER 3 Satellite Communication (14 Marks)**

#### **3marks question**

22. Explain satellite downlink model.
23. Define
  - i) Elevation Angle
  - ii) Azimuth Angle
  - iii) Foot Print
24. Explain working principle of Transponder.
25. Give the frequency bands used in satellite communication

#### **4marks question**

26. With reference to satellite communication explain Station keeping & satellite altitude.
27. Compare FDMA, TDMA, CDMA.