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**5th Sem / Eltx**  
**Subject:- Digital Communication**

Time : 3Hrs.

M.M. : 100

**SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1 The modulation techniques used to convert analog signal into digital signals are
- a) Pulse code modulation
  - b) Delta modulation
  - c) Adaptive delta modulation
  - d) All
- Q.2 The combination compressor and expander
- a) Compander
  - b) Encoder
  - c) Decoder
  - d) None of these
- Q.3 Which type of demodulator is used in the frequency hopping technique
- a) Coherent
  - b) Non coherent
  - c) Coherent and Non Coherent
  - d) None of the above

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- Q.4 In flat top sampling \_\_\_\_\_ is kept constant
- a) Phase
  - b) Amplitude
  - c) frequency
  - d) Time period
- Q.5 Modem stands for
- a) Modulator
  - b) Demodulator
  - c) Modulator and Demodulator
  - d) None of these
- Q.6 Blocking is not a problem in a \_\_\_\_\_ switch
- a) Single stage
  - b) Two stage
  - c) Multistage
  - d) Three stage
- Q.7 RS-232 is an example of \_\_\_\_\_ transmission
- a) Synchronous
  - b) Asynchronous
  - c) Both A and B
  - d) None of these
- Q.8 Types of modulation used in MODEMs
- a) FSK
  - b) QPSK
  - c) QAM
  - d) All of above
- Q.9 In differential code modulation techniques the decoding is performed by
- a) Sampler
  - b) Accumulator
  - c) PLL
  - d) Quantizer
- Q.10 PCM frame contains a group of \_\_\_\_\_ bits.
- a) 16
  - b) 24
  - c) 28
  - d) 32

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### SECTION-B

**Note:** Objective type questions. All questions are compulsory. (10x1=10)

- Q.11 Define PPM?
- Q.12 Define synchronization?
- Q.13 What do mean by equalizers?
- Q.14 Define QPSK?
- Q.15 Expand DPCM?
- Q.16 Write the ways to increase the channel band width
- Q.17 Define crosstalk?
- Q.18 Define eco suppressor?
- Q.19 Define ICW?
- Q.20 Draw a PAM wave

### SECTION-C

**Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

- Q.21 Explain basic block diagram of data communication system?
- Q.22 In which way digital transmission is better than analog transmission?
- Q.23 What do you understand by frequency Hopping?
- Q.24 Write a note on band width requirement of data transmission circuits.

- Q.25 Differentiate between synchronous and Asynchronous TDM?
- Q.26 Discuss phase shift keying?
- Q.27 Write a note on equalizers?
- Q.28 Explain FSK in brief.
- Q.29 What are the various types of modems according to transmission speed?
- Q.30 List the advantages and disadvantages of PCM?
- Q.31 Write the concept of delay distortion?.
- Q.32 Differentiate between packet switching and message switching.
- Q.33 Explain the error of quantization.
- Q.34 Explain RS232C interface in brief.
- Q.35 Explain two tone modulation.

### SECTION-D

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

- Q.36 Explain various frequency hopping spread spectrum techniques?
- Q.37 With the help of block diagram, explain ASK system?
- Q.38 Explain various types of noise in digital communication system?