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5th Sem./ Eltx.
Subject : Digital Communication

Time : 3 Hrs. M.M. : 100

SECTION-A

Note: Multiple type Questions. All Questions are compulsory. (10x1=10)

Q.1 The process of assigning a discrete value from a prescribed set of a finite numbers of such discrete value to each one of the sample values of the message signal, is called

a) Filtering b) Decoding
c) Noise Removal d) Quantisation

Q.2 Disadvantage of PCM is its

a) High signal to noise ratio
b) High bit rate
c) High bandwidth
d) High power requirement

Q.3 Cross Talk is

a) The disturbance caused in the nearby channel or circuit due to transmitted signal
b) Adjacent frequency rejection
c) Generation of closely lying side bands
d) None of the above

Q.4 In its modulation phase, modem turns computer's

a) Digital signal to Analog signal
b) Analog signal to Digital signal
c) Digital signal to Electric signal
d) Electric signal to Digital signal

Q.5 It we want to directly connect a remote network or internet using a modem, we need to connect the modem to a

a) Analog telephone line b) Digital telephone line
c) Teleconference line d) ATM line

Q.6 The amount of data that can be transmitted over a network at any given time and measured in Hertz is called

a) Baud rate b) Bandwidth
c) Bytes d) None of the above

Q.7 The types of sampling methods are

a) Quantised, sampled and ideal
b) Ideal, sampled and flat top
c) Ideal, natural and flat top
d) None of the above

Q.8 PCM is an example of _____ conversion.

a) Digital to digital b) Digital to Analog
c) Analog to Analog d) Analog to Digital

Q.9 According to Nyquist theorem, the sampling rate that can be used in a PCM system is _____ the highest audio frequency.

a) Once b) Eight times
c) Twice d) Thrice

Q.10 Quantisation noise can be reduced by increasing

a) Sampling rate
b) Bandwidth
c) Number of standard quantum levels
d) All of the above

Section-B

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

Q.11 Name different types of transmission.

Q.12 What is synchronization?

Q.13 What is expander?

Q.14 Define Echo suppressor.

Q.15 What are various applications of PAM?

Q.16 Discuss noise.

Q.17 What is digital switching?

Q.18 What is QPSK?

Q.19 What is basic need of modem?

Q.20 What is the basic principle of STS switching?

Section-C

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

Q.21 Explain half duplex and full duplex transmission modes.

Q.22 Draw block diagram of TST switch.

Q.23 Discuss advantages and disadvantages of PAM.

Q.24 What is sampling?

Q25 Draw and explain timing diagram of FSK.

Q.26 Explain function of equalizer.

Q.27 What is transmission delay?

Q.28 Differentiate different types of Modem on the basis of transmission speeds.

Q.29 Discuss the concept of Adaptive Delta Modulation.

Q.30 What are the advantages of Pulse Code Modulation?

Q.31 Define Interrupted Continuous Wave.

Q.32 Explain bandwidth requirement of a transmission circuit.

Q.33 What are different modes of MODEM operations?

Q.34 What do you mean by Quantization?

Q.35 Differentiate between noise and crosstalk.

Section-D

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

Q.36 What is Companding? Explain its concept in detail.

Q.37 With the help of block diagram explain Frequency Hopping Spread Spectrum Technique.

Q.38 Elaborate various characteristics of data transmission circuits.