Analog and Digital Communication Question Bank

EEE-VI Sem

1) Explain the frequency deviation characteristics in FM.

2) Explain the frequency deviation characteristics in PM.

3) Explain FM in terms of instantaneous frequency.

4) Explain PM in terms of instantaneous phase.

5. Phase deviation and modulation index

6) Write the general equation of angle modulation in terms of modulation index.

7) What is meant by peak phase deviation?

8) What is modulation index in PM?

9) What is meant by index of modulation?

10) Give the expression and derive the unit for modulation index of PM.

11) Give the expression and derive the unit for modulation index of FM.

12) Frequency deviation and percent modulation

13) Define frequency deviation.

14) Write the equation for frequency deviation.

15) Write the three forms equation for FM in terms of K1, Δf and m.

16) Express modulation index in terms of frequency deviation and modulating signal frequency.

17) How the PM and FM modulation indexes varies with modulating signal frequency?

18) How the percent modulation is calculated in angle modulation?

19) Write the classification of angle modulated waveforms in terms in terms of indexes.

20) What is meant by narrowband FM?

21). Explain the band width requirements of angle modulated waves.

FSK transmitter

22) Draw the block diagram and waveforms of FSK Modulator or FSK transmitter.

23) What is meant by VCO and write about its contribution in FSK Transmitter?

24) What is meant by frequency deviation Δf(in terms of v

25) Give the expression for the h-factor of FSK (in terms of Δf and in terms of f

26) What are the types of FSK Receiver?

27) Draw the block diagram of Noncoherent FSK Receiver.

28) What is the work of BPF in Noncoherent FSK Receiver?

29) What is the work of Envelope detector in Noncoherent FSK Receiver?

30) What is the work of Comparator in Noncoherent FSK Receiver?

31) Draw the block diagram of Coherent FSK Receiver

32) What is M-ary / Beyond binary/ Higher than binary encoding

33) Explain BPSK in Details

34) What is the function of balanced modulator / Product modulator at receiver?

35 Explain QPSK in Details

36) What is the relationship between input bit rate andoutput baud rate. (output baud rate = 1/2 input bit rate)?

37) Explain QPSK in Details

38) Explain following

1) Define PWM.

2) Define PPM.

3) Define PAM. (Intermediate form of modulation with PSK, QAM and PCM)

4) Define PCM.

5) What is meant by Natural sampling?

6) What is meant by Flat top sampling?

39) Explain following

1) What is DSSS?

2) Draw the block diagram of DSSS transmitter?

40) Synchronization: State about Acquisition and Tracking