Jayawant Shikshan Prasarak Mandal's

JSPM Narhe Technical Campus

Rajarshi Shahu School Of Engineering and Research

Department of Electronics and Telecommunication Engineering

Oral question bank - Digital Communication

1. Define random process
2. Define mean, correlation, standard deviation and variance of random process.
3. Explain stationary, non-stationary, wide sense stationary and Ergodic process.
4. Explain Gaussian process.
5. Define power spectral density.
6. Explain Error Probability.
7. What is matched filter?
8. What are the features of a digital communication system?
9. Difference between analog and digital communication systems
10. Advantages of digital communication compared to analog communication
11. What is an equalizer?
12. Explain Inter symbol interference (ISI)?
13. Explain how an eye pattern is helpful in understanding ISI problems.
14. Explain the methods to eliminate the Inter symbol interference.
15. Explain the concept Signal space representation or Geometric representation of signal.
16. Give the classification of digital modulation
17. Define ASK, PSK, FSK, QPSK, M-ary PSK, QAM.
18. State bandwidth of ASK, PSK, FSK, QPSK, M-ary PSK, QAM.
19. State bit rate of ASK, PSK, FSK, QPSK, M-ary PSK, QAM.
20. Compare digital modulation techniques.
21. What are the advantages of M-ary PSK?
22. Draw the spectrum of the BPSK, QPSK and BFSK signal and compare their bandwidths.
23. What is constellation diagram?
24. What do you mean by coherent and non-coherent detection?
25. Draw BPSK transmitter and explain.

26. Draw QPSK transmitter and explain.
27. Draw FSK transmitter and explain.
28. Draw M-ary PSK transmitter and explain.
29. Draw DPSK transmitter and explain.
30. What are the advantages of QPSK over BPSK?
31. What is principal of QAM?
32. What is spread spectrum?
33. Define processing gain & jamming margin.
34. List the applications of spread spectrum system.
35. Explain DSSS.
36. State the applications of DSSS.
37. Explain DS-SS system with coherent BPSK.
38. What is PN sequence?
39. Explain properties of PN sequence.
40. Explain FHSS.
41. State the applications of FHSS.
42. Explain Slow Frequency Hopping.
43. Explain Fast Frequency Hopping.
44. Explain PN sequence generator.
45. Explain Balance & Run property of PN sequence