1. Define aliasing effect with a neat diagram?
2. Differentiate the advantages and disadvantages of digital communication?
3. Describe the need of companding?
4. Define Sampling rate?
5. Describe the importance of prediction in DPCM?
6. Write the different types of digital modulation techniques?
7. Describe the various type of noise effects in Delta Modulation?
8. Describe the classifications in Digital communication systems?
9. Define uniform quantization with a neat diagram?
10. Discuss various types of effects in DM system?
11. Draw the block diagram of regenerative repeater and explain its operation?
12. Write a short notes on the concept of quantization?
13. A PCM system can handle message signals of bandwidth up to 5 kHz and has a sampling rate of

50 kHz. A sinusoidal signal of 1.5 volts peak amplitude and frequency 2 kHz is applied to the

system. Determine i) the step-size Δ required to avoid quantization error ii) the (S/N)q for the system for the given sinusoidal signal.

1. A PCM system uses a uniform quantizer followed by a 7 bit encoder. The system bit rate is 50

Mbits/sec. Calculate the maximum bandwidth of the message signal for which this system operates satisfactorily.

1. Illustrate the modulation and demodulation processes in Pulse Amplitude Modulation (PAM),
2. providing a detailed explanation accompanied by a well-organized circuit diagram, demonstrating a
3. deeper understanding of the topic?
4. Draw the basic digital communication system and explain its operation?
5. Calculate the Quantization error in DM system?
6. Illustrate the modulation and demodulation processes in Pulse Position Modulation (PPM),
7. providing a comprehensive explanation accompanied by a well-organized circuit diagram?
8. Compare PCM and DM systems?
9. Construct the block diagram of a Delta Modulation (DM) system and elaborate on its operation, elucidating the key processes involved?
10. Draw the PCM system block diagram and explain its operation?
11. Compare the Pulse analog modulation techniques of PAM,PWM and PPM?
12. Explain the Quantization process in digital communication system?
13. Apply the principles of the ADM system with neat block diagram and elucidate its functioning?
14. Explain the concept of companding in PCM system?
15. Illustrate the DPCM system block diagram and analyze its operation in detail?