Department of Electronics & Communication Engineering

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Digital Communication

Question Bank

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Unit-2

1. Why is quantization noise present in PCM?

2. How the quantization error in PCM system can be reduced?

3. Distinguish between uniform and nonuniform quantization.

4. Explain how the channel capacity of a PCM system can be measured

5. What do you understand by the term adaptive coding?

6. What is meant by thermal noise in PCM?

7. Differentiate PCM and DPCM.

8. With the help of neat block diagram explain the principle of Adaptive Delta Modulation.

9. Two signals are to be transmitted over a common channel by means of time division multiplexing. The highest frequency of first signal is 1 kHz, and that of other is 1.5 kHz. What is the minimum value of the permissible sampling rate? Justify your answer.

10. Consider an audio signal with spectral component limited to the frequency band of 300 to 3300Hz . A PCM signal is generated with s sampling rate of 8000 samples/s. the required output signal to noise ratio is 30 dB.What is the minimum number of uniform quantizing levels needed, and what is the minimum number of bits per sample needed and calculate the minimum system bandwidth required.