ECE Interview Questions with Answers

On

Analog Communication

1. What is sampling? What is Sampling Theorem?

Ans: Sampling is defined as the process in which an analog signals are converted into digital signals. It means that a continuous time signal is converted into a discrete time signal.

Sampling Theorem is defined as : ℚ¢KŜ Ŏ2ÿŭλÿ℠2℠ž ŭλŸŜ ăλƎÿ1·f ŭKI·ŭ ŎI·ÿ̄ōŜ ℕŜŁJℕesented in its samples and recovered back if the sampling frequency (fs) is greater than the maximum frequency of the signal (fm) that is **fs >2fm'.**

2. Define PAM and write down its drawbacks?

Ans: ***Pulse*** Amplitude Modulation is the process by which the amplitude of the regularly spaced pulses varies according to the the amplitude of the modulating signal.

The drawbacks are:

a. Since the amplitude of the pulses varies therefore the peak power of the modulating s/g is much greater.

b. The bandwidth required for transmitting is greater since the amplitude varies.

3. What is Modulation? What happens in over modulation?

Ans: ***Modulation*** is defined as the process in which some characteristics of the signal called carrier is varied according to the modulating or baseband signal. For example - Amplitude Modulation, Phase Modulation, Frequency Modulation.

In case of over modulation, the modulation index is greater than one and envelope distortion occurs.

4. What do you mean by Nyquist rate?

Ans: In case of Nyquist rate, the sampling frequency is equal to the maximum frequency of the signal and therefore the successive cycles of the spectrum does not overlap.

5. What do you mean by FM and classify FM.