

## Important Topic vise Question For ADC.

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### Topic 1: Intro. Communication System (10-15 Marks)

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- 1) Basic Block diag. of comm. System
- 2) Define the following term
  - i) Signal to noise ratio
  - ii) Noise Fig.
  - iii) Noise Factor
- 3) Write short note on Thermal and shot Noise.

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### Topic 2: Analog Modulation and Demodulation (25-30 Marks)

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- 1) Need of Modulation
- 2) Mathematical expert. Of AM.
- 3) Problem on AM
- 4) Compare High and Low Level Modulation
- 5) Short note on tracking error and double spotting.
- 6) Pre-emphasis and de-emphasis
- 7) Noise Triangle.
- 8) Explain super heterodyne receiver

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### Topic 3: Pulse analog modulation (15-20 Marks)

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- 1) Sampling theorem with proof.
- 2) Explain PWM and PPM.

3) Short note on TDM and FDM.

4) Aliasing Error.

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## Topic 4: Digital Modulation Tech. (15-20 Marks)

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1) Define following term

- i) Entropy
- ii) Information
- iii) Information Rate

2) State and explain Shannon's theorem.

3) Prove that  $C$  (infinite) =  $1.44 s/n$

4) Huffman coding algo.

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## Topic 5: Digital Modulation Tech. (40-50 Marks)

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1) Draw and explain block dia. of PCM.

2) Explain Companding.

3) What is adaptive delta modulation?

4) Limitation of delta modulation.

5) Line Coding.

6) Explain Modulation and Demodulation of BPSK, QPSK, DPSK, M-ary scheme.

7) Write short note on ISI and equalization

8) Explain Quantization.

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