

Communication Systems - Important Topics

Author : Electronics Engineering Department

Date : 2025

Need for Modulation

Modulation helps in long-distance communication by varying a carrier signal with message information.

Types of Modulation

Amplitude Modulation (AM): Varies the signal's amplitude.

Frequency Modulation (FM): Varies the frequency of the signal.

Phase Modulation (PM): Varies the phase of the signal.

Comparison of Digital and Analog Communication

Digital communication offers noise resistance and efficient data transmission, whereas analog communication provides continuous signal representation.

Communication Channels

Wired: Includes coaxial cables and optical fibers.

Wireless: Includes radio waves and microwaves.

Satellite Communication

Uses geostationary satellites to transmit signals over large distances.

Cellular Mobile Communication

Divides coverage area into cells for efficient frequency reuse.

