

AMET-27-II DIGITAL VOICE PICTURE COMMUNICATION

1. RADIO RECEIVERS

Trf and Superheat receivers, AM broadcast receivers, Communication Receivers, Tuning Indicator, Diversity reception, FM receivers.

2. NOISE

Introduction, External noise, Internal noise, Noise in Communication system, Noise in AM,FM, and PM system, Noise in pulse modulated systems.

3. PROPAGATION OF WAVES

Reflection/ refraction of radio waves, Atmospheric absorption – Tropospheric Scatter, Ionospheric Layers, Sky Waves, Virtual Height, Regular & irregular ionospheric variations, Skip distance, Primary & Secondary Service Area.

4. BROAD BANK COMMUNICATIONS

Time division multiplexing, Frequency Division multiplexing, Computer Communication System, Microwave Links, Line of Sight (LOS)links, Tropospheric Links, Satellite Communications – Choice of Orbit FDMA, TDMA, SPADE, Optical Communications – Modulation and Detection, Integrated service digital network (ISDN).

5. PICTURE-SIGNAL TRANSMISSION AND RECEPTION

Facsimile-transmission and reception, Television-scanning process, CCIR-B standards, TV camera systems – image orthicon and vidicon –transmission and reception principle for black and white TV signals, Principle of color TV – primary colours, colour TV systems – NTSC, SECAM, PAL, Transmission and reception using PAL system, PIL Picture tube.

6. RECORDING AND DIGITAL PROCESSING OF VIDEO SIGNALS

Basic Video recording principles, Recording of luminance signals, Recording of Chrominance signal, Frequency range of the VHS signal, Tape loading, Tape format in VHS systems, Operating modes of a video cassette recorder, E-E mode, Playback mode, Digital processing of Video Signals, How much digital is the Digital TV? Video processor, Audio Processing, Control Computer, CD Players

