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221043

**4th Semester/ECE, ECE**
**(For Speech & Hearing Impaired)**
**Subject: Communication Systems**

Time : 3 Hrs. M.M. : 60

**SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory (6x1=6)

Q.1` For what modulation index, we can expect maximum undistorted power output of a transmitter?

a) 50% b) 100%
c) 25% d) 0

Q.2 What is the purpose of modulation in communication systems?

a) To eliminate noise from the signal
b) To increase the frequency of the signal
c) To encode information onto a carrier wave for transmission
d) To amplify the transmitted signal

Q.3 In AM, the parameter of the carrier wave that is varied is:

a) Frequency b) Amplitude
c) Phase d) Wavelength

Q.4 In FM, the parameter of the carrier wave that is varied is:

a) Amplitude b) Frequency

c) Phase d) Wavelength

Q.5 The tramsmitter-receiver combination in the satellite is known as a __.

a) Relay b) Repeater

c) Transponder d) Duplexer

Q.6 Why amplitude modulation is used for broadcasting?

a) It is more immune to noise

b) It has more fidelity

c) It avoids receiver complexity

d) It has better selectivity and sensitivity

## SECTION-B

**Note:** Objective/ Completion type questions. All questions are compulsory. (6x1=6)

Q.7 Write the full form of FM.

Q.8 What happens to the beam-width of antenna if the frequency of operation is increased?

Q.9 S/N ratio means_____.

Q.10 AGC stands for _____.

Q.11 Modulation is used to allow the use of practical antennas. (True/False)

Q.12 VSAT stands for _____.



## SECTION-C

**Note:** Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

Q.13 Define passive and active satellites.

Q.14 Write characteristics of a radio receiver.

Q.15 Write working of half wave dipole.

Q.16 Define virtual height and critical frequency.

Q.17 Explain delayed AGC.

Q.18 Explain polarization of FM waves.

Q.19 Draw & explain basic block diagram of communication system.

Q.20 Write short on VSAT.

Q.21 Explain Yagi antenna.

Q.22 Explain ionosphere and its layers.

## SECTION-D

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

Q.23 Draw and explain block diagrams of satellite communication link.

Q.24 Draw and explain block diagram of Armstrong FM transmitter.

Q.25 Write short note on :

a) Dish antenna

b) Space wave propagation