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126563

6th Sem.

Subject : Analog Communication System

Time : 3 Hrs. M.M. : 100

SECTION-A

Note: Objective type questions. All questions are compulsory (10x1=10)

Q.1 Frequency range of VHF is _____.

Q.2 Modulation index of FM is _____.

Q.3 Ring modulator produces _____.

Q.4 VCO stands for _____.

Q.5 Slope detector is used to demodulate _____.

Q.6 FM broadcast range is _____.

Q.7 In AM, the value of m lies between _____.

Q.8 Pre-emphasis circuit is used to _____.

Q.9 Ring modulator is a _____ modulator.

SECTION-D

Note: Long answer type questions. Attempt any three questions out of four questions. 3x10=30

Q.33 Derive an expression for frequency modulated signal. How to represent FM signal in time domain.

Q.34 Draw & explain block diagram of communication system and applications of communication.

Q.35 Explain the block diagram and working of Armstrong FM transmitter.

Q.36 Explain block diagram of FM receiver.

Q.10 _____ is a FM modulator.

SECTION-B

Note: Very short answer type questions. Attempt any ten questions out of twelve questions. 10x2=20

Q.11 Define full duplex communication.

Q.12 Define Max. Deviation Ratio.

Q.13 Define Amplitude modulation.

Q.14 Give types of electronics communication.

Q.15 What is VCO.

Q.16 Define sensitivity.

Q.17 Outline demodulator.

Q.18 Name any two AM modulators.

Q.19 What is image rejection ratio.

Q.20 Name any two FM demodulators.

Q.21 What is power relation in AM wave.

Q.22 Two advantages of AM over FM.

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. 8x5=40

Q.23 Explain the electromagnetic spectrum.

Q.24 Derive an expression for amplitude modulated wave.

Q.25 Compare FM and PM.

Q.26 Give working principle of square law modulator.

Q.27 Give working principle of Reactance modulator.

Q.28 Explain block diagram of AM transmitter.

Q.29 What is significant of modulation index.

Q.30 Give working principle of Ratio detector.

Q.31 Explain the working of superhet receiver.

Q.32 In a FM system if max. frequency deviation is 5KHz & the modulating frequency is 4 KHz. Calculate the bandwidth of FM signal.