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**3rd Sem / Eltx, IC, Power Eltx, Elect. & Eltx. Engg.
Subject:- Principles of Communication Engineering**

Time : 3Hrs. M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1 In Amplitude modulation which characteristics of carrier signal is varied

 - a) Amplitude
 - b) frequency
 - c) Phase
 - d) None of these

Q.2 The range of modulation index in amplitude modulation lies

 - a) 1 to 100
 - b) 1 to 1000
 - c) 0 to 1
 - d) None

Q.3 Vestigial sideband is most commonly used in

 - a) Radio transmission
 - b) TV transmission
 - c) Telephony
 - d) All of these

Q.4 The most power consuming element of AM wave is

 - a) Carrier component
 - b) Modulating signal
 - c) Lower sideband
 - d) upper sideband

(1) 181033/171033/121033
/031033/106555

- Q.5 In FM modulation index is inversely proportional to the
a) Carrier frequency b) Modulating frequency
c) Frequency deviation d) None

Q.6 A balanced modulator produces
a) AM b) DSB
c) SSB d) VSB

Q.7 The function of FM detector is to detect
a) Modulating signal b) Carrier signal
c) Modulated signal d) None of these

Q.8 The main element of phase locked loop FM demodulator is
a) Audio Amplifier
b) Voltage Controlled Oscillator
c) Cathode Ray Oscilloscope
d) None of above

Q.9 Indicate which of the following system is not analog in nature
a) Pulse position modulation
b) Pulse amplitude modulation
c) Pulse width modulation
d) Pulse code modulation

Q.10 FM modulator is used for generating
a) AM signals b) FM signals
c) PM signals d) PAM signals

(2) 181033/171033/121033
 /031033/106555

SECTION-B

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

Q.11 Give full form of DSB-SC.

Q.12 What do you understand by carrier signal in modulation.

Q.13 Modulation index of AM is given by _____.

Q.14 PAM stands for _____.

Q.15 Give full form of TDM.

Q.16 The difference between higher cut off frequency and lower cut off frequency is known as _____

Q.17 Pre emphasis boosts the higher frequencies at transmitter. (True/False)

Q.18 Write abbreviation of VCO and VSB

Q.19 SSB-SC stands for _____.

Q.20 PPM signal is generated with the help of PWM signal. (True/False)

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

Q.21 What do you mean by modulation and What is its need?

Q.22 Draw the modulated wave form of amplitude modulated wave.

Q.23 Explain vestigial sideband system of modulation.

(3) 181033/171033/121033
/031033/106555

Q.24 Explain carson's rule.

Q.25 Describe Pre emphasis circuit.

Q.26 Explain the working of square law modulator with suitable diagram.

Q.27 Explain varactor diode modulator regarding FM.

Q.28 Describe the circuit of linear diode detector in AM demodulation.

Q.29 Explain the block diagram of phase locked loop.

Q.30 Explain phase modulation in brief.

Q.31 Give comparison of amplitude modulation and frequency modulation.

Q.32 What do you understand by sampling theory. Define sampling theorem.

Q.33 Give comparison between FDM & TDM.

Q.34 Explain PAM in brief.

Q.35 Explain Noise triangle with diagram.

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

Q.36 Explain the block diagram of modern communication system.

Q.37 Describe frequency modulation in detail with suitable diagram

Q.38 Write a note on

a) PWM

b) PPM

(1360)

(4) 181033/171033/121033
/031033/106555