

No. of Printed Pages : 4 181042/171042/121042
Roll No. /031042/105942/106563

4th Sem / Eltx, Power Eltx
Subject:- Communication Systems/ Comm. Engg.

Time : 3Hrs.

M.M. : 100

SECTION-A

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

- Q.1 Standard IF value for AM receiver is
a) 455 KHz b) 455 MHz
c) 550 KHz d) 1650 KHz
- Q.2 Frequency of VHF lies from
a) 30 KHz-300 KHz b) 3 KHz-30KHz
c) 30 MHz-300 MHz d) 3 MHz-30 MHz
- Q.3 10 MHz is equal to
a) 10×10^3 Hz b) 10×10^9 Hz
c) 1×10^7 Hz d) 10×10^6 Hz
- Q.4 ISB stands for
a) Internal sideband
b) Independent sideband
c) Inter signal Bandwidth
d) None of the above
- Q.5 FM Broadcast band use frequency range from _____ to _____.
a) 88 KHz to 108 KHz b) 550 KHz to 1650 KHz
c) 16 MHz to 48 MHz d) 88 MHz to 108 MHz

(1) 181042/171042/121042
/031042/105942/106563

- Q.6 In Yagi antenna reflector is
a) longer than driven element
b) shorter than driven element
c) can be longer or shorter than driven element
d) Does not exist
- Q.7 A loop antenna is commonly used for
a) Radar
b) Satellite communication
c) direction finding
d) All of the above
- Q.8 The highest frequency that is reflected back by ionosphere layer at vertical distance is known as
a) Maximum usable frequency
b) Critical frequency
c) Resonant frequency
d) None of the above
- Q.9 The minimum height of outer atmosphere is
a) 100 km b) 150 km
c) 200 km d) 400 km
- Q.10 Various components of VSAT are
a) Dish Antenna b) Transreceiver
c) Satellite router d) All of the above

SECTION-B

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

- Q.11 VHF and UHF stands for _____
- Q.12 Fidelity in a communication receiver is provided by audio stage. (True/False)

(2) 181042/171042/121042
/031042/105942/106563

- Q.13 Pre emphasis process is done at receiver section side. (True/False)
- Q.14 Amplitude limiters are used to remove amplitude variations in FM receivers. (True/False)
- Q.15 To provide two or more voice circuits with the same carrier, it is necessary to use _____. (VSB/ISB).
- Q.16 In FM receiver, RF amplifier is designed to handle large bandwidth. (True/False)
- Q.17 Ground Waves propagate in the frequency range of _____.
- Q.18 Full form of FET is _____.
- Q.19 Carrier signal in modulation is of very low frequency. (True/False)
- Q.20 VSAT stands for _____.

SECTION-C

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

- Q.21 On the basis of frequency, classify transmitters.
- Q.22 Briefly explain ISI standards regarding radio receivers.
- Q.23 What do you understand by sensitivity of radio Receiver.
- Q.24 Describe the operation of RF amplifier, Mixer and local oscillator in Radio Receiver block diagram.
- Q.25 Explain delayed AGC in detail.
- Q.26 Describe radiation of electromagnetic energy from a dipole.

(3) 181042/171042/121042
/031042/105942/106563

- Q.27 Write a short note on effective area and aperture regarding Antenna.
- Q.28 Explain the principle and working of Yagi Uda antenna.
- Q.29 What do you understand regarding selection criteria for intermediate frequency.
- Q.30 Explain Dish antenna in detail.
- Q.31 Explain ionosphere and its different layers.
- Q.32 Write note on skip distance and maximum usable frequency.
- Q.33 Describe Duct propagation.
- Q.34 Explain Ground wave propagation and its characteristics.
- Q.35 What do you understand by Active and Passive satellites.

SECTION-D

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

- Q.36 Explain VSAT with its features in detail.
- Q.37 Describe the principle and working of superheterodyne AM receiver with suitable block diagram.
- Q.38 Write a short note on
- Apogee
 - Perigee
 - Orbit

(980)

(4) 181042/171042/121042
/031042/105942/106563