Program: BE Electrical Engineering

Curriculum Scheme: Revised 2016

Examination: Third Year Semester V

Course Code: EEDLO5011 and Course Name: Communication Engineering

Time: 1 hour   Max. Marks: 50

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Note to the students:- All the Questions are compulsory and carry equal marks .

Q1.	The equation for the modulated PM wave is given by
Option A:	5 sin (2 π × 10^6 t)
Option B:	5 sin 1000 t + 5 sin 10^6 t
Option C:	5 sin (2 π × 10^6 t + 10 sin 6280 t)
Option D:	5 sin (2 π × 10^6 t − 10 sin 6280 t)
Q2.	Noise immunity of PM is _____.
Option A:	Better than AM and FM
Option B:	Worse than AM and FM
Option C:	Better than AM but worse than FM
Option D:	Better than FM but worse than AM
Q3.	Sensitivity is defined as …
Option A:	Ability of receiver to amplify weak signals
Option B:	Ability to reject unwanted signals
Option C:	Ability to convert incoming signal into Image Frequency
Option D:	Ability to reject noise
Q4.	The amount of frequency deviation in FM signal depends on…
Option A:	Amplitude of the modulating signal
Option B:	Carrier frequency
Option C:	Modulating frequency
Option D:	Transmitter amplifier
Q5.	VCO is used to generate …
Option A:	Direct FM
Option B:	Indirect FM
Option C:	SSB-SC
Option D:	DSB-SC
Q6.	In radio receivers, varactor diodes are used for ….
Option A:	Tuning
Option B:	Demodulation

Option C:	Mixing
Option D:	None of the above
Q7.	The modulation index of FM is given by ….
Option A:	μ = frequency deviation/ modulating frequency
Option B:	μ = modulating frequency /frequency deviation
Option C:	μ = modulating frequency/ carrier frequency
Option D:	μ = carrier frequency / modulating frequency
Q8.	The spectrum of the sampled signal may be obtained without overlapping only if …..
Option A:	fs ≥ 2fm
Option B:	fs < 2fm
Option C:	fs > fm
Option D:	fs < fm
Q9.	The desired signal of maximum frequency fm centered at frequency f=0 may be recovered if ….
Option A:	The sampled signal is passed through low pass filter
Option B:	Filter has the cut off frequency fm
Option C:	Both a and b
Option D:	None of the above
Q10.	Calculate the Nyquist rate for sampling when a continuous time signal is given by x(t) = 5 cos 100πt +10 cos 200πt − 15 cos 300πt
Option A:	300Hz
Option B:	600Hz
Option C:	150Hz
Option D:	200Hz
Q11.	Noise is added to a signal _____
Option A:	In the channel
Option B:	At receiving antenna
Option C:	At transmitting antenna
Option D:	During regeneration of information
Q12.	Demodulation is done in …………
Option A:	Receiving antenna
Option B:	Transmitter
Option C:	Radio receiver
Option D:	Transmitting antenna
Q13.	A high Q tuned circuit will permit an amplifier to have high ……………
Option A:	Fidelity
Option B:	Frequency range
Option C:	Sensitivity
Option D:	Selectivity

Q14.	The type of signal transmission in which no power is wasted on the carrier is known as ….
Option A:	Amplitude modulation
Option B:	Frequency modulation
Option C:	Sideband Suppressed Carrier signal
Option D:	Unsuppressed carrier
Q15.	Full AM signal is preferred over SSB in broadcasting purpose because _____
Option A:	generation of full AM is easier
Option B:	detection of full AM is simpler
Option C:	requires large bandwidth
Option D:	for both detection and generation of full AM
Q16.	What is the percentage of modulation if the modulating signal is of 7.5V and carrier is of 9V?
Option A:	100
Option B:	91
Option C:	83.33
Option D:	0
Q17.	The upper and lower sideband frequencies for amplitude modulation of 5KHz signal with a 30KHz carrier frequency will be?
Option A:	35KHz and 25KHz
Option B:	34KHz and 24KHz
Option C:	25KHz and 35KHz
Option D:	0.35KHz and 0.25KHz
Q18.	An AM receiver uses a diode detector for demodulation . This enables it to satisfactorily receive …..
Option A:	single-side band ,supressed -carrier
Option B:	single-sideband,reduced -carrier
Option C:	ISB
Option D:	Single-sideband, full carrier
Q19.	Choose one among the following which is not a type of internal noise.
Option A:	Shot noise
Option B:	Flicker noise
Option C:	extraterrestrial noise
Option D:	Partition noise
Q20.	When a receiver has good blocking performance this means that
Option A:	its image frequency rejection is poor
Option B:	it does not suffer from double spotting
Option C:	it is affected by AGC derived from nearby transmission
Option D:	its detector suffers from burnout

Q21.	Indicate the false statement.The superhetrodyne receiver replaced the TRF receiver because the latter suffered from …
Option A:	gain variation over the frequency coverage range
Option B:	insufficient gain and sensitivity
Option C:	inadequate selectivity at high frequencies
Option D:	instability
Q22.	When probability of receiving a symbol is 1 then how much information will be obtained?
Option A:	Little information
Option B:	Much information
Option C:	No information
Option D:	Infinity Information
Q23.	In Pule Width Modulation ….. of pulses remains constant.
Option A:	Width
Option B:	Amplitude
Option C:	Frequency
Option D:	Duration
Q24.	In Pulse Position Modulation, the drawbacks are ….
Option A:	Synchronization is required between transmitter and receiver
Option B:	Large bandwidth is required as compared to PAM
Option C:	None of the above
Option D:	Both A and B
Q25.	In channel encoding procedure …
Option A:	Redundancy bits are added
Option B:	Errors are corrected
Option C:	Redundancy bits are added & Errors are corrected
Option D:	Either Redundancy bits are added or Errors are corrected

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Question	Correct Option (Enter either 'A' or 'B' or 'C' or 'D')
Q1.	C
Q2.	C
Q3.	A
Q4	A
Q5	A
Q6	A
Q7	A
Q8.	A
Q9.	C
Q10.	A
Q11.	A
Q12.	C
Q13.	D
Q14.	C
Q15.	B
Q16.	C

Q17.	A
Q18.	D
Q19.	C
Q20.	B
Q21.	B
Q22.	C
Q23.	B
Q24.	D
Q25.	C