

Examination 2020

Academic Year 2020-2021	
Subject: Fundamentals of communication Engineering(CBGS Scheme)	
Year &Semester: SE sem 4	Branch: Electronics

- Instructions: 1] All the questions are Compulsory and carry equal marks
2] All questions are Multiple Choice Questions.
3] Select the correct Answer from the Choices.

Time: 1 hour

Max. Marks: 50

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Note: Assume suitable data wherever necessary.

Q1.	What is the carrier frequency in an AM wave when its highest frequency component is 850Hz and the bandwidth of the signal is 50Hz?
Option A:	80
Option B:	625
Option C:	695
Option D:	825
Q2.	Calculate the depth of modulation when a transmitter radiates a signal of 10KW after modulation and 8KW without modulation of the signal.
Option A:	80%
Option B:	70%
Option C:	50%
Option D:	100%
Q3.	The total power in an Amplitude Modulated signal if the carrier of an AM transmitter is 1000W and it is modulated 50 percent.
Option A:	1000
Option B:	1225
Option C:	1275
Option D:	1400
Q4.	For which of the modulated system, the linear amplified modulated stage is used?
Option A:	high level amplitude modulated system
Option B:	low level amplitude modulated system
Option C:	high level frequency modulated system
Option D:	low level frequency modulated system
Q5.	A narrow band noise can exist in _____
Option A:	AM and FM both
Option B:	AM only
Option C:	PCM only
Option D:	FM only
Q6.	What is the modulation index value if $V_{\max}=7.2V$ and $V_{\min}=2.2V$?

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Option A:	0.531
Option B:	0.667
Option C:	0.42
Option D:	0.7
Q7.	AM demodulation technique can be divided into _____ and _____ demodulation.
Option A:	Direct, indirect
Option B:	Slope detector, Zero crossing
Option C:	Coherent, noncoherent
Option D:	Quadrature detection
Q8.	What is the effect on the deviation d of an FM signal when it is passed through a mixer?
Option A:	Doubles
Option B:	Reduces
Option C:	Becomes half
Option D:	Remains unchanged
Q9.	The frequency deviation in PM is proportional to _____
Option A:	Modulating voltage
Option B:	Modulating frequency
Option C:	Modulating frequency and voltage
Option D:	amplitude
Q10.	What is the full form of AGC?
Option A:	Amplitude to Gain conversion
Option B:	Automatic Gain conversion
Option C:	Automatic Gain control
Option D:	Audio Gain control
Q11.	Calculate the Nyquist rate for sampling when a continuous time signal is given by $x(t) = 5 \cos 700\pi t + 10 \cos 200\pi t - 15 \cos 500\pi t$
Option A:	200
Option B:	300
Option C:	500
Option D:	700
Q12.	What is the required bandwidth according to the Carson's rule, when a 100 MHz carrier is modulated with a sinusoidal signal at 1KHz, the maximum frequency deviation being 50 KHz.
Option A:	1KHz

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Option B:	100KHz
Option C:	102KHz
Option D:	150KHz
Q13.	The audio signal having frequency 500Hz and voltage 2.6V, shows a deviation of 5.2KHz in a Frequency Modulation system. If the audio signal voltage changes to 8.6V, calculate the new deviation obtained.
Option A:	17.2
Option B:	18.2
Option C:	19.2
Option D:	20.2
Q14.	Selectivity 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
Q15.	The signals which are obtained by encoding each quantized signal into a digital word is called as
Option A:	PAM signal
Option B:	PCM signal
Option C:	AM signal
Option D:	FM signal
Q16.	The ratio of actual frequency deviation to the maximum allowable frequency deviation is called:
Option A:	Multi tone modulation
Option B:	Percentage modulation
Option C:	Phase deviation
Option D:	Modulation index
Q17.	In a delta modulation system, granular noise occurs when the
Option A:	Modulating signal increases rapidly
Option B:	Pulse rate decreases
Option C:	Pulse amplitude decreases
Option D:	Modulating signal remains constant
Q18.	A PAM signal can be detected using
Option A:	Low pass filter
Option B:	High pass filter
Option C:	Band pass filter
Option D:	Butterworth high pass filter
Q19.	A PWM signal can be generated by

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Option A:	An astable multi vibrator
Option B:	A monostable multi vibrator
Option C:	Integrating a PPM signal
Option D:	Differentiating a PPM signal
Q20.	PPM stands for
Option A:	Pulse phase modulation
Option B:	Pulse Position modulation
Option C:	Phase position modulation
Option D:	Phase pulse modulation
Q21.	The sampling technique having the minimum noise interference is
Option A:	Instantaneous sampling
Option B:	Natural sampling
Option C:	Flat top sampling
Option D:	Sample and hold
Q22.	In PWM signal reception, the Schmitt trigger circuit is used
Option A:	To remove noise
Option B:	To produce ramp signal
Option C:	For synchronization
Option D:	To add other signals
Q23.	In FDM, if 7 signals is to be multiplexed than atleast ____ carrier, each of different frequency required.
Option A:	1
Option B:	3
Option C:	5
Option D:	7
Q24.	In asynchronous TDM, if device X has data to send , the data goes to _____ in the frame
Option A:	The next available slot
Option B:	A preassigned slot
Option C:	The first slot
Option D:	The third slot
Q25.	A complete communication system must include
Option A:	transmitter and receiver
Option B:	transmitter, a receiver, and a channel
Option C:	transmitter, a receiver, and a spectrum analyzer
Option D:	multiplexer, a demultiplexer, and a channel

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