

# Examination 2020

<b>Academic Year 2019-2020</b>	
<b>Subject: Principle of communication Engineering(CBCS Scheme)</b>	
<b>Year &amp;Semester: SE sem 4</b>	<b>Branch: Electronics</b>

- 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.	The AM spectrum consists of
Option A:	The upper side band
Option B:	The upper and lower side band
Option C:	The carrier frequency
Option D:	The carrier, upper & lower side band
Q2.	Calculate the depth of modulation when a transmitter radiates a signal of 9.8KW after modulation and 8KW without modulation of the signal.
Option A:	80%
Option B:	67%
Option C:	50%
Option D:	100%
Q3.	The total power in an Amplitude Modulated signal if the carrier of an AM transmitter is 200 W and it is modulated 50 percent.
Option A:	200
Option B:	225
Option C:	250
Option D:	300
Q4.	Standard intermediate frequency used for AM receiver is
Option A:	455MHz
Option B:	455KHz
Option C:	435Mhz
Option D:	435Hz
Q5.	What happens when the amplitude of the modulating signal is greater than the amplitude of the carrier?
Option A:	Distortion
Option B:	Decay
Option C:	Amplification
Option D:	Attenuation
Q6.	What is the modulation index value if $V_{\max}=5.9v$ and $V_{\min}=1.2v$ ?
Option A:	0.662

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Option B:	0.5
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.	With change in modulating frequency ( $f_m$ ), the modulation index $m_p$ of a phase modulated signal will _____.
Option A:	Increases
Option B:	Decreases
Option C:	Increase by factor 2
Option D:	Remains same
Q9.	The equation for the modulated PM wave is given by
Option A:	$5 \sin (2 \pi \times 10^6 t)$
Option B:	$5 \sin 1000 t + 5 \sin 10^6 t$
Option C:	$5 \sin (2 \pi \times 10^6 t + 10 \sin 6280 t)$
Option D:	$5 \sin (2 \pi \times 10^6 t - 10 \sin 6280 t)$
Q10.	What is the full form of AFC?
Option A:	Amplitude to frequency conversion
Option B:	Automatic frequency conversion
Option C:	Automatic frequency control
Option D:	Audio frequency control
Q11.	Calculate the Nyquist rate for sampling when a continuous time signal is given by $x(t) = 5 \cos 100\pi t + 10 \cos 200\pi t - 15 \cos 500\pi t$
Option A:	200
Option B:	300
Option C:	400
Option D:	500
Q12.	In radio receivers, varactor diodes are used for
Option A:	Tuning
Option B:	Mixing
Option C:	Demodulation
Option D:	Addition
Q13.	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

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Option D:	Transmitter amplifier
Q14.	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
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.	Pre emphasis is done before
Option A:	Before modulation
Option B:	Before transmission
Option C:	Before detection at receiver
Option D:	After detection at receiver
Q17.	What circuit provides the initial selectivity in a receiver?
Option A:	Amplifier
Option B:	Attenuator
Option C:	Multiplexer
Option D:	LC tuned circuits
Q18.	In a superheterodyne receiver
Option A:	the IF stage has better selectivity than RF stage
Option B:	the RF stage has better selectivity than IF stage
Option C:	the RF stage has same selectivity than IF stage
Option D:	IF does not use
Q19.	In a ratio detector
Option A:	the linearity is worse than in a phase discriminator
Option B:	the output is twice that obtainable from a similar phase discriminator
Option C:	stabilization against signal strength variations is provided
Option D:	the circuit is the same as in a discriminator, except that the diodes are reversed
Q20.	PAM stands for
Option A:	Pulse Analog modulation
Option B:	Pulse Amplitude modulation
Option C:	Phase Amplitude modulation
Option D:	Phase Analog modulation

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Q21.	In order to reduce quantizing noise, one must
Option A:	increase the number of standard amplitudes
Option B:	send pulses whose sides are more nearly vertical
Option C:	use an RF amplifier in the receiver
Option D:	Increase the number of samples per second
Q22.	Companding is used
Option A:	to overcome quantizing noise in PCM
Option B:	in PCM transmitters, to allow amplitude limited in the receivers
Option C:	to protect small signals in PCM from quantizing distortion
Option D:	in PCM receivers, to overcome impulse noise
Q23.	In FDM, if 5 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 _____, if device has no data to send, its time slot remains empty.
Option A:	Synchronous TDM
Option B:	Asynchronous TDM
Option C:	FDM
Option D:	WDM
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