University of Mumbai

Examination 2020 under cluster 4 (PCE)

Program: BE EXTC Engineering
Curriculum Scheme: Rev2012
Examination: Third Year Semester V
Course Code: _ETC 502 and Course Name: Analog Communication

Time: 1 hour   Max. Marks: 50

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

Q1.	Noise figure is a parameter that represents a _-----------_ of the system.
Option A:	Noisiness
Option B:	Efficiency
Option C:	Maximum output
Option D:	Maximum power handling capacity
Q2.	Noise figure measures the
Option A:	Power degradation
Option B:	Noise degradation
Option C:	SNR degradation
Option D:	None of the mentioned
Q3.	What is the line connecting the positive and negative peaks of the carrier waveform called?
Option A:	Peak line
Option B:	Maximum amplitude ceiling
Option C:	Modulation index
Option D:	Envelope
Q4.	A super-hetrodyne receiver selects a radio wave of frequency 850 kHz. Then the frequency of the local oscillator will be
Option A:	1305 kHz
Option B:	455 kHz
Option C:	850 kHz
Option D:	445 kHz
Q5.	What happens when the amplitude of the modulating signal is greater than the amplitude of the carrier?
Option A:	Decay
Option B:	Distortion
Option C:	Amplification
Option D:	Attenuation
Q6.	Which of the following modulating signal voltage would cause over-modulation on a carrier voltage of 10v?
Option A:	9.5

Option B:	9.99
Option C:	10
Option D:	12
Q7.	One of the following of a carrier wave is varied is accordance with the intensity of the signal, in amplitude modulation
Option A:	phase
Option B:	amplitude
Option C:	frequency
Option D:	phase or frequency
Q8.	FM signal is better than AM signal because
Option A:	More adjacent channel interference
Option B:	Less immune to noise
Option C:	Amplitude limiters are used to avoid amplitude variations
Option D:	Same adjacent channel interference
Q9.	Wide band FM has the characteristics:
Option A:	The frequency sensitivity kf is less
Option B:	Bandwidth is less
Option C:	The frequency sensitivity kf is large
Option D:	No Bandwidth
Q10.	A 100MHz carrier is frequency modulated by 10 KHz wave. For a frequency deviation of 50 KHz, calculate the modulation index of the FM signal.
Option A:	100
Option B:	50
Option C:	70
Option D:	90
Q11.	What is the value of carrier frequency in the following equation for the FM signal? v(t)= 5 cos(6600t+ 12sin2500t)
Option A:	1150 Hz
Option B:	6600 Hz
Option C:	2500 Hz
Option D:	1050 Hz
Q12.	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
Q13.	Armstrong method is used for the generation of
Option A:	Direct FM
Option B:	Indirect FM

Option C:	SSB-SC
Option D:	DSB-SC
Q14.	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
Q15.	For tuning MW band 550 kHz to 1650 kHz with IF – 455 kHz the range of local ascillator frequency is
Option A:	3.56
Option B:	4.38
Option C:	8
Option D:	9.5
Q16.	If a receiver has a poor capacity of blocking adjacent channel interference then the receiver has
Option A:	Poor selectivity
Option B:	Poor Signal to Noise ratio
Option C:	Poor sensitivity
Option D:	Poor fidelity
Q17.	If a radio receiver amplifies all the signal frequencies equally well, it is said to have high _____
Option A:	Sensitivity
Option B:	Selectivity
Option C:	Distortion
Option D:	Fidelity
Q18.	TRF receivers are used for
Option A:	Multiplication of modulating signal
Option B:	Removal of unwanted signal
Option C:	Mixing modulating signal with unwanted signal
Option D:	Both detection of modulating signal and removal of unwanted signal
Q19.	The fidelity of AM receiver basically depends on frequency response of the
Option A:	AF amplifier
Option B:	RF amplifier
Option C:	Mixer
Option D:	Local oscillator
Q20.	Which device is needed for the reconstruction of signal?
Option A:	Low pass filter
Option B:	Equalizer
Option C:	High pass filter
Option D:	Low pass filter & Equalizer

Q21.	The signal can be reconstructed
Option A:	At Nyquist rate
Option B:	Above Nyquist rate
Option C:	At & above the Nyquist rate
Option D:	Below Nyquist rate
Q22.	Which of the following is the main advantage of PCM system
Option A:	lower noise
Option B:	lower power
Option C:	lower Bandwidth
Option D:	lower cost
Q23.	Companders are used in communication systems to
Option A:	Compress bandwidth
Option B:	to improve frequency response
Option C:	to improve signal to noise ratio
Option D:	maintain temperature
Q24.	When normal speech signal is to be transmitted, the bandwidth required for PCM channel will be
Option A:	1 khz
Option B:	8khz
Option C:	16khz
Option D:	64khz
Q25.	Which system is prone to quantizing noise
Option A:	pulse code modulation
Option B:	pulse position modulation
Option C:	time division multiplex
Option D:	frequency division multiplex

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Question	Correct Option (Enter either 'A' or 'B' or 'C' or 'D')
Q1.	A
Q2.	C
Q3.	D
Q4	A
Q5	B
Q6	D
Q7	B
Q8.	B
Q9.	C
Q10.	B
Q11.	D
Q12.	C
Q13.	B
Q14.	A
Q15.	B
Q16.	A
Q17.	D
Q18.	D
Q19.	A
Q20.	D
Q21.	C
Q22.	A
Q23.	C
Q24.	D
Q25.	A