

Program: BE Information Technology Engineering

Curriculum Scheme: Revised 2016

Examination: Second Year Semester III

Course Code: SEITC305

Course Name: Principle of Communications

Time: 1 hour

Max. Marks: 50

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

Q1.	A complete communication system must include:
Option A:	a transmitter and receiver
Option B:	a transmitter, a receiver, and a channel
Option C:	a transmitter, a receiver, and a spectrum analyzer
Option D:	a multiplexer, a demultiplexer, and a channel
Q2.	When two or more signals share a common channel, it is called:
Option A:	sub-channeling
Option B:	signal switching
Option C:	SINAD
Option D:	multiplexing
Q3.	The baseband bandwidth for a voice-grade (telephone) signal is:
Option A:	approximately 3 kHz
Option B:	20 Hz to 15,000 Hz
Option C:	at least 5 kHz
Option D:	at least 10 kHz
Q4.	“Man-made” noise can come from:
Option A:	equipment that sparks
Option B:	temperature
Option C:	static
Option D:	pressure
Q5.	Signal-to-Noise ratio is calculated as:
Option A:	signal voltage divided by noise voltage
Option B:	signal power divided by noise power
Option C:	first add the signal power to the noise power, then divide by noise power
Option D:	signal current divided by noise current
Q6.	A 400 W carrier is amplitude modulated with $m = 0.75$. The total power in AM is
Option A:	400 W
Option B:	512 W
Option C:	588 W

Option D:	650 W
Q7.	If transmission bandwidth is doubled in FM, SNR is
Option A:	doubled
Option B:	raised four times
Option C:	decreased four times
Option D:	halved
Q8.	In an AM wave the carrier and one of the side bands is suppressed. If $m = 0.5$, the percentage saving in power is
Option A:	50%
Option B:	83.3%
Option C:	94.4%
Option D:	100%
Q9.	In an FM system, when the AF is 500 Hz and the AF voltage is 2.4 V, the deviation is 4.8 kHz. If the AF voltage is now increased to 7.2 V, the new deviation will be
Option A:	4.8 KHz
Option B:	9.6 KHz
Option C:	14.4 KHz
Option D:	28.8 KHz
Q10.	Shot noise is generated in:
Option A:	transistors and diodes
Option B:	resistors
Option C:	copper wire
Option D:	transmitter
Q11.	Noise Figure is a measure of:
Option A:	how much noise is in a communications system
Option B:	how much noise is in the channel
Option C:	how much noise an amplifier adds to a signal
Option D:	signal-to-noise ratio in dB
Q12.	In communication receivers the fidelity is provided by
Option A:	audio stage
Option B:	detector range
Option C:	mixer stage
Option D:	RF stage
Q13.	The image frequency of a superheterodyne receiver is
Option A:	created within the receiver itself
Option B:	not rejected by IF tuned circuits
Option C:	independent of the frequency of tuning
Option D:	due to insufficient adjacent channel rejection

Q14.	Which of the following is the process of 'aliasing'?
Option A:	Peaks overlapping
Option B:	Phase overlapping
Option C:	Amplitude overlapping
Option D:	Spectral overlapping
Q15.	Which of the following is not a form of pulse modulation?
Option A:	Pulse amplitude modulation
Option B:	Pulse width modulation
Option C:	Pulse position modulation
Option D:	Pulse frequency modulation
Q16.	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:	FM signal
Option D:	Sampling and quantization
Q17.	Quantization noise can be reduced by _____ the number of levels.
Option A:	Decreasing
Option B:	Increasing
Option C:	Doubling
Option D:	Squaring
Q18.	Delta modulation uses _____ bits per sample.
Option A:	One
Option B:	Two
Option C:	Four
Option D:	Eight
Q19.	Adaptive DPCM is used to
Option A:	Increase bandwidth
Option B:	Decrease bandwidth
Option C:	Increase SNR
Option D:	Decrease SNR
Q20.	In polar RZ format for coding, symbol '0' is represented by
Option A:	Zero voltage
Option B:	Negative voltage
Option C:	Pulse is transmitted for half the duration
Option D:	Negative voltage and Pulse is transmitted for half the duration
Q21.	Electromagnetic waves are represented in which of the following format?
Option A:	Longitudinal waves
Option B:	Transverse waves

Option C:	Sinusoidal waves
Option D:	Surface waves
Q22.	FSK reception is
Option A:	Phase Coherent
Option B:	Phase non coherent
Option C:	Phase Coherent & non coherent
Option D:	Frequency Coherent & non coherent
Q23.	In PCM the samples are dependent on _____
Option A:	Time
Option B:	Frequency
Option C:	Quantization level
Option D:	Interval between quantization level
Q24.	Which one of the following is an indirect way of generating FM?
Option A:	Varactor diode modulator
Option B:	Reactance FET modulator
Option C:	Reactance bipolar transistor modulator
Option D:	Armstrong modulator
Q25.	The use of SSB
Option A:	halves the bandwidth required for transmission
Option B:	does not affect the bandwidth for transmission
Option C:	decreases the bandwidth required for transmission by 25%
Option D:	decreases the bandwidth required for transmission by 66.6%