

Program: BE Electrical Engineering

Curriculum Scheme: Revised 2016

Examination: Third Year Semester VI

Course Code: EEDLO6021 and Course Name: Digital 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.	Entropy is
Option A:	Average information per message
Option B:	Information in a signal
Option C:	Amplitude of signal
Option D:	Frequency of signal
Q2.	Mutual information should be
Option A:	Positive
Option B:	Negative
Option C:	Positive & Negative
Option D:	An integer
Q3.	Information rate basically gives an idea about the generated information per _____ by source.
Option A:	Second
Option B:	Minute
Option C:	Hour
Option D:	Meter

Q4.	The information source of a digital communication system can be
Option A:	Packetized
Option B:	Continuous
Option C:	Packetized & Continuous
Option D:	Discontinuous
Q5.	What are the main features of a receiver?
Option A:	Synchronization
Option B:	Multiple parallel receiver chain
Option C:	Synchronization & Multiple parallel receiver chain
Option D:	Multiple series receiver chain
Q6.	A signal can be recovered from its sample by using
Option A:	Low pass filter
Option B:	High pass filter
Option C:	Band pass filter
Option D:	Band stop filter
Q7.	Modulation channel consists of
Option A:	Amplifier
Option B:	Signal processing units
Option C:	Amplifier & Signal processing units
Option D:	Correlator
Q8.	The interference caused by the adjacent pulses in digital transmission is called
Option A:	Inter symbol interference

Option B:	White noise
Option C:	Image frequency interference
Option D:	Transit time noise
Q9.	The criterion used for pulse shaping to avoid ISI is
Option A:	Nyquist criterion
Option B:	Quantization
Option C:	Sample and hold
Option D:	PLL
Q10.	In duobinary signalling method, for M-ary transmission, the number of output obtained is
Option A:	$2M$
Option B:	$2M+1$
Option C:	$2M-1$
Option D:	M^2
Q11.	The number of bits of data transmitted per second is called
Option A:	Data signaling rate
Option B:	Modulation rate
Option C:	Coding
Option D:	Encoding
Q12.	What is symbol rate packing?
Option A:	Maximum possible symbol transmission rate
Option B:	Maximum possible symbol receiving rate

Option C:	Maximum bandwidth
Option D:	Maximum ISI value allowed
Q13.	Time for convergence of an equalizer is not a function of _____
Option A:	Equalizer algorithm
Option B:	Equalizer structure
Option C:	Time rate of change of multipath radio channel
Option D:	Transmitter characteristics
Q14.	Which waveform type has better noise immunity?
Option A:	NRZ
Option B:	RZ
Option C:	Phase encoded
Option D:	Multilevel codes
Q15.	Characteristics of Matched filter are
Option A:	It maximizes the SNR
Option B:	It produces ISI.
Option C:	It may produce phase error if synchronization is improper.
Option D:	It minimizes the SNR
Q16.	Power spectral density of white noise is
Option A:	$2N_0$
Option B:	$N_0/2$
Option C:	$N_0/4$
Option D:	$4N_0$

Q17.	The symbol of probability under the tail of Gaussian pdf is called as
Option A:	Complementary error function
Option B:	Coerror function
Option C:	Complementary error and coerror function
Option D:	Error function
Q18.	The impulse response of Matched filter is
Option A:	Delayed version of mirror image of signal
Option B:	Same version of mirror image of signal
Option C:	Delayed and same version of mirror image of signal
Option D:	Same as that of the signal
Q19.	The input to a matched filter is given by $s(t) = 10 \sin(2\pi \times 10^6 t)$ for $0 < t < 10^{-4}$ and $s(t) = 0$ otherwise, the peak amplitude of the filter output is
Option A:	10 Volts
Option B:	5 Volts
Option C:	10 millivolts
Option D:	5 millivolts
Q20.	The likelihood ratio test is done between
Option A:	Likelihood of S1 by likelihood of S2
Option B:	Likelihood of S2 by likelihood of S1
Option C:	Likelihood of S1 by likelihood of S1
Option D:	Likelihood of S2 by likelihood of S2

Q21.	The process of changing one of the characteristics of carrier analog signal based on information in digital signal is called
Option A:	Analog to Analog conversion
Option B:	Analog to Digital conversion
Option C:	Digital to Analog conversion
Option D:	Digital to Digital conversion
Q22.	In Binary Phase Shift Keying system, the binary symbols 1 and 0 are represented by carrier with phase shift of
Option A:	$\pi/2$
Option B:	π
Option C:	2π
Option D:	0
Q23.	It is a multilevel modulation in which four phase shift are used for representing four different symbols.
Option A:	ASK
Option B:	FSK
Option C:	PSK
Option D:	QPSK
Q24.	The bandwidth of BFSK is
Option A:	Lower than BPSK
Option B:	Same as BPSK
Option C:	Higher than BPSK
Option D:	Lower than ASK

Q25.	In which type of modulation bit rate is four times the baud rate
Option A:	ASK
Option B:	FSK
Option C:	PSK
Option D:	PCM

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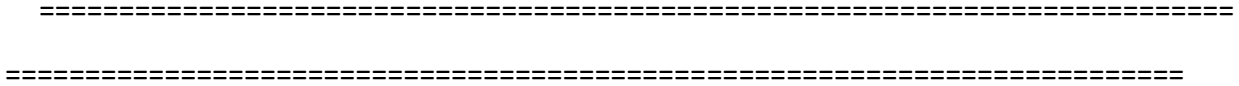
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Question	Correct Option (Enter either 'A' or 'B' or 'C' or 'D')
Q1.	A
Q2.	C
Q3.	A
Q4	C
Q5	C
Q6	A
Q7	C
Q8.	A
Q9.	A
Q10.	C
Q11.	A
Q12.	A
Q13.	D
Q14.	A
Q15.	A

Q16.	B
Q17.	C
Q18.	A
Q19.	D
Q20.	A
Q21.	C
Q22.	B
Q23.	D
Q24.	C
Q25.	C