

Electronics and Telecommunication Engineering

Sample Paper

Curriculum Scheme: Revised 2016

Examination: Third Year Semester V

Course Code: ECC502 and Course Name: Digital Communication

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

Q1.	What is the value of an area under the conditional PDF?
Option A:	Greater than "0" but less than "1".
Option B:	Greater than "1"
Option C:	Equal to "1"
Option D:	Infinite
Q2.	Quadrature amplitude modulation (QAM) is a combination of _____.
Option A:	PSK and FSK
Option B:	ASK and FSK
Option C:	ASK and PSK
Option D:	ASK and AM
Q3.	The sequence of operations in which PCM is done is
Option A:	Sampling, quantizing, encoding
Option B:	Quantizing, encoding, sampling
Option C:	Quantizing, sampling, encoding
Option D:	encoding Quantizing, sampling
Q4.	For a stationary process, autocorrelation function depends on
Option A:	Time
Option B:	Time difference
Option C:	Number of outcomes
Option D:	Does not depend on time
Q5.	Which of the following codeword is having even parity
Option A:	0110010
Option B:	1001001
Option C:	1101110
Option D:	0011011
Q6.	For a systematic linear block code of (7,4) the message bits and parity bits respectively are

Option A:	7,4
Option B:	4,7
Option C:	4,3
Option D:	3,4
Q7.	In digital communication system, smaller the code rate,-----are the redundant bits.
Option A:	Less
Option B:	More
Option C:	Equal
Option D:	Unpredictable
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 method of converting a word to stream of bits is called as
Option A:	Binary coding
Option B:	Source coding
Option C:	Bit coding
Option D:	Cipher coding
Q10.	_____ is used to maximize Signal to noise ratio even for non -Gaussian noise.
Option A:	Optimum filter
Option B:	Matched Filter
Option C:	Coherent receiver
Option D:	Baseband receiver
Q11.	The hamming weight of code word 11010100
Option A:	4
Option B:	3
Option C:	2
Option D:	1
Q12.	If A and B are independent events, then $P(A \cap B) =$ _____.
Option A:	$2 P(A)$
Option B:	$P(A) / P(B)$
Option C:	$P(A) + P(B)$
Option D:	$P(B). P(A)$
Q13.	Syndrome is calculated by
Option A:	H^T/r

Option B:	$r H^T$
Option C:	rH
Option D:	$r+ H^T$
Q14.	In MSK, the difference between the higher and lower frequency is
Option A:	Same as the bit rate
Option B:	Four time the bit rate
Option C:	Twice of the bit rate
Option D:	Half of the bit rate
Q15.	The linear block code for a given message 110 and coefficient matrix $[P]=[011,101,110]$
Option A:	001110
Option B:	011011
Option C:	110110
Option D:	1110000
Q16.	In Cumulative distribution function (CDF), if X is a continuous variable then it's CDF is defined as probability of random variable X which takes the value _____.
Option A:	$2X$
Option B:	$X + Y$
Option C:	$\leq X$
Option D:	$\geq X$
Q17.	If the minimum hamming distance is 3 the number errors that can be detected of a hamming code
Option A:	2
Option B:	1
Option C:	3
Option D:	0
Q18.	In Baseband receiver dump refers to abrupt _____ after each sampling.
Option A:	charging of capacitor
Option B:	discharge of capacitor
Option C:	charging of inductor
Option D:	discharge of inductor
Q19.	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

Q20.	For a source transmitting M messages with equal probabilities the average information is given by
Option A:	$\log_{10} M$
Option B:	$\log_e M$
Option C:	$\log_2 M$
Option D:	$\log_2 1/M$
Q21.	For correlator if input is sine wave then output is _____ for period 0 to T.
Option A:	Square wave
Option B:	Sine wave
Option C:	Impulse
Option D:	Linear Ramp
Q22.	In mathematical operation of Matched filter, signal is convolved with _____ response of filter.
Option A:	Impulse
Option B:	Ramp
Option C:	Unit
Option D:	Steady State
Q23.	QPSK is a modulation scheme where each symbol consists of
Option A:	4 bits
Option B:	2 bits
Option C:	1 bits
Option D:	M number of bits, depending upon the requirement
Q24.	The main drawback of M-ary FSK is
Option A:	bandwidth required is more
Option B:	power required is more
Option C:	probability of error is more
Option D:	coherent detection is required
Q25.	The bandwidth of BFSK is _____ than BPSK
Option A:	Lower
Option B:	Same
Option C:	Higher
Option D:	Not predictable