

These are sample MCQs to indicate pattern, may or may not appear in examination

University of Mumbai

Examination 2020

Program: BE Electronics and Telecommunication Engineering

Curriculum Scheme: Revised 2016

Examination: Third Year Semester V

Course Code: ECC502 and Course Name: Digital 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.	A set of numerical values assigned to a sample space is called
Option A:	Random sample
Option B:	Random variable
Option C:	Random numbers
Option D:	Random experiment
Q2.	Let A and B are mutually exclusive event. $P(A)=0.32$, $P(B)=0.16$. Then $P(A \cup B)$ ' is
Option A:	0
Option B:	0.48
Option C:	0.32
Option D:	0.55
Q3.	If $P(A)=0.2$ and $P(B)=0.7$ then what must be $P(A \cup B)$ if A and B are independent
Option A:	0.12
Option B:	0.18
Option C:	0.14
Option D:	0.2
Q4.	A variable which can assume finite or countably infinite number of values is known as:
Option A:	Continuous
Option B:	Discrete
Option C:	Qualitative
Option D:	Statically
Q5.	In Analog to digital conversion, the sequence of the blocks is
Option A:	Sampling, Quantization, Encoder
Option B:	Encoder, Sampling, Quantization
Option C:	Quantization, Sampling, Encoder
Option D:	Quantization, Encoder, Sampling

Q6.	Six messages with probabilities 0.2,0.25,0.15,0.1,0.2,0.1 respectively. What is Entropy ?
Option A:	2.5 bits/msg
Option B:	3.5 bits/msg
Option C:	4.0 bits/msg
Option D:	5 bits/msg
Q7.	In Shannon Hartley Theorem, as channel capacity increases the signal power
Option A:	Increases
Option B:	Decreases
Option C:	constant
Option D:	Doubled
Q8.	The _____ of the code-word is the number of non-zero elements.
Option A:	Size
Option B:	Weight
Option C:	Distance
Option D:	Subspace
Q9.	Linear codes are used for
Option A:	Forward error correction
Option B:	Backward error correction
Option C:	Forward error detection
Option D:	Backward error detection
Q10.	The code rate of a block code is the ratio of
Option A:	Block length to message length
Option B:	Message length to block length
Option C:	Message weight to block length
Option D:	Block length to Message weight
Q11.	Block codes are generated using
Option A:	Generator polynomial
Option B:	Generator matrix
Option C:	Generator polynomial & matrix
Option D:	Parity Check matrix
Q12.	The received code contains an error if the syndrome vector is
Option A:	Zero
Option B:	Non zero
Option C:	Infinity
Option D:	all ones
Q13.	Which parameter is used in soft decision algorithm?
Option A:	Only Euclidean distance
Option B:	Only Euclidean distance squared

Option C:	Both Euclidean distance & distance squared
Option D:	Constraint length
Q14.	For non-coherent reception of PSK which method is used.
Option A:	Differential encoding
Option B:	Decoding
Option C:	Differential encoding & Decoding
Option D:	Differential decoding
Q15.	Which of the following is not a linear modulation technique?
Option A:	OQPSK
Option B:	$\pi/4$ QPSK
Option C:	FSK
Option D:	BPSK
Q16.	Which is the major advantage of QPSK in terms of bandwidth and noise immunities?
Option A:	Requirement of Bandwidth is half than PSK with similar noise immunities
Option B:	Requirement of Bandwidth is twice than PSK with similar noise immunities
Option C:	Requirement of Bandwidth is one -third than PSK with different noise immunities
Option D:	Requirement of Bandwidth is double than PSK with either same or different noise immunities depending on the transmission rate
Q17.	In M-ary FSK as M tends to infinity, probability of error tends to
Option A:	Infinity
Option B:	Unity
Option C:	Zero
Option D:	half
Q18.	ASK is rarely used in modem because
Option A:	It shifts only between ON and OFF state
Option B:	It is highly susceptible to noise
Option C:	It take care of amplitude only
Option D:	It is less susceptible to noise
Q19.	ASK is result of combination of shift keying and
Option A:	digital modulation
Option B:	analog modulation
Option C:	amplitude modulating
Option D:	frequency modulation
Q20.	Number of bits of data transmitted per second is called
Option A:	Modulation rate
Option B:	Coding rate
Option C:	Data signaling rate

Option D:	sampling rate
Q21.	Which criterion is used for pulse shaping to avoid ISI
Option A:	Quantization
Option B:	Nyquist criteria
Option C:	Sample and hold
Option D:	Phase locked loop
Q22.	The impulse response of a matched filter is a time reversal and delayed version of the -----
Option A:	output signal
Option B:	received signal
Option C:	noisy signal
Option D:	input signal
Q23.	In integrate and dump receiver, at the beginning of each bit interval, the voltage across capacitor is -----
Option A:	maximum
Option B:	minimum
Option C:	zero
Option D:	variable
Q24.	The mean value or average value of the Gaussian noise is -----
Option A:	one
Option B:	zero
Option C:	constant
Option D:	not constant
Q25.	The white noise contains all the frequency components in ----- proportion
Option A:	increasing
Option B:	decreasing
Option C:	equal
Option D:	unequal