

NADAR SARASWATHI COLLEGE OF ENGINEERING AND TECHNOLOGY, THENI.

Course/Branch : B.E/ECE	Year / Semester : III / V	Format No.	NAC/TLP-07a.13
Subject Code : EC8501	Subject Name : Digital Communication	Rev. No.	02
Unit No : 4	Unit Name : Digital Modulation Coding	Date	30.09.2020

OBJECTIVE TYPE QUESTION BANK

S. No.	Objective Questions (MCQ /True or False / Fill up with Choices)	BTL
1	The preferred orthogonalization process for its numerical stability is a. Gram- Schmidt process b. House holder transformation c. Optimization d. All of the above	L2
2	For two vectors to be orthonormal, the vectors are also said to be orthogonal. The reverse of the same a. Is true b. Is not true c. Is not predictable d. None of the above	L2
3	Orthonormal set is a set of all vectors that are a. Mutually orthonormal and are of unit length b. Mutually orthonormal and of null length c. Both a & b d. None of the above	L4
4	In On-Off keying, the carrier signal is transmitted with signal value '1' and '0' indicates a. No carrier b. Half the carrier amplitude c. Amplitude of modulating signal d. None of the above	L5
5	ASK modulated signal has the bandwidth a. Same as the bandwidth of baseband signal b. Half the bandwidth of baseband signal c. Double the bandwidth of baseband signal d. None of the above	L1
6	Coherent detection of binary ASK signal requires a. Phase synchronization b. Timing synchronization c. Amplitude synchronization d. Both a and b	L1
7	The probability of error of DPSK is _____ than that of BPSK. a. Higher b. Lower c. Same	L2

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	d. Not predictable		
8	<p>In Binary Phase Shift Keying system, the binary symbols 1 and 0 are represented by carrier with phase shift of</p> <p>a. $\pi/2$ b. c. 2 d. 0</p>		L1
9	<p>BPSK system modulates at the rate of</p> <p>a. 1 bit/ symbol b. 2 bit/ symbol c. 4 bit/ symbol d. None of the above</p>		L1
10	<p>The BPSK signal has +V volts and -V volts respectively to represent</p> <p>a. 1 and 0 logic levels b. 11 and 00 logic levels c. 10 and 01 logic levels d. 00 and 11 logic levels</p>		L3
11	<p>The binary waveform used to generate BPSK signal is encoded in</p> <p>a. Bipolar NRZ format b. Manchester coding c. Differential coding d. None of the above</p>		L2
12	<p>The bandwidth of BFSK is _____ than BPSK.</p> <p>a. Lower b. Same c. Higher d. Not predictable</p>		L3
13	<p>In Binary FSK, mark and space respectively represent</p> <p>a. 1 and 0 b. 0 and 1 c. 11 and 00 d. 00 and 11</p>		L1
14	<p>The frequency shifts in the BFSK usually lies in the range</p> <p>a. 50 to 1000 Hz b. 100 to 2000 Hz c. 200 to 500 Hz d. 500 to 10 Hz</p>		L1

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15	<p>The spectrum of BFSK may be viewed as the sum of</p> <p>a. Two ASK spectra b. Two PSK spectra c. Two FSK spectra d. None of the above</p>	L2
16	<p>The maximum bandwidth is occupied by</p> <p>a. ASK b. BPSK c. FSK d. None of the above</p>	L3
17	<p>QPSK is a modulation scheme where each symbol consists of</p> <p>a. 4 bits b. 2 bits c. 1 bits d. M number of bits, depending upon the requirement</p>	L1
18	<p>The data rate of QPSK is _____ of BPSK.</p> <p>a. Thrice b. Four times c. Twice d. Same</p>	L5
19	<p>QPSK system uses a phase shift of</p> <p>a. b. $\pi/2$ c. $\pi/4$ d. 2</p>	L1
20	<p>Minimum shift keying is similar to</p> <p>a. Continuous phase frequency shift keying b. Binary phase shift keying c. Binary frequency shift keying d. QPSK</p>	L1
21	<p>In MSK, the difference between the higher and lower frequency is</p> <p>a. Same as the bit rate b. Half of the bit rate c. Twice of the bit rate d. Four time the bit rate</p>	L2
22	<p>The technique that may be used to reduce the side band power is</p> <p>a. MSK</p>	L3

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	b. BPSK c. Gaussian minimum shift keying d. BFSK		
23	Regenerative repeaters are used for a. Eliminating noise b. Reconstruction of signals c. Transmission over long distances d. All of the above		L1
24	Scrambling of data is a. Removing long strings of 1's and 0's b. Exchanging of data c. Transmission of digital data d. All of the above		L5
25	In which system, bit stream is portioned into even and odd stream? a) BPSK b) MSK c) QPSK d) FSK		L1
26	The error performance of MPSK _____ as M or k increases. a) Increases b) Decreases c) Stays constant d) None of the mentioned		L1
27	For FSK signalling, WT is equal to a) 0 b) 1 c) 0.737 d) Infinity		L3
28	Energy per symbol E_s is given as a) $E_s = E_b(\log_2 M)$ b) $E_s = E_b / (\log_2 M)$ c) $E_s = 2E_b(\log_2 M)$ d) $E_s = E_b / 2(\log_2 M)$		L2

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29	Phase-locked loop circuitry is used for a) Carrier wave recovery b) Phase estimation c) Carrier wave recovery & Phase estimation d) None of the mentioned	L3
30	In differential PSK the data is a) Encoded differentially b) Decoded differentially c) Encoded & Decoded differentially d) None of the mentioned	L4
31	The error probability of DPSK is _____ worse than PSK. a) Twice b) 3 db c) Twice (3db) d) None of the mentioned	L1

