

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 : 3	Unit Name : Baseband Transmission & Reception	Date	30.09.2020

OBJECTIVE TYPE QUESTION BANK

S. No.	Objective Questions (MCQ /True or False / Fill up with Choices)	BTL
1	ISI may be removed by using a. Differential coding b. Manchester coding c. Polar NRZ d. None of the above	L2
2	Timing jitter is a. Change in amplitude b. Change in frequency c. Deviation in location of the pulses d. All of the above	L2
3	Probability density function defines a. Amplitudes of random noise b. Density of signal c. Probability of error d. All of the above	L4
4	Impulse noise is caused due to a. Switching transients b. Lightning strikes c. Power line load switching d. All of the above	L5
5	The interference caused by the adjacent pulses in digital transmission is called a. Inter symbol interference b. White noise c. Image frequency interference d. Transit time noise	L1
6	Eye pattern is a. Is used to study ISI b. May be seen on CRO c. Resembles the shape of human eye d. All of the above	L1
7	The time interval over which the received signal may be sampled without error may be explained by a. Width of eye opening of eye pattern b. Rate of closure of eye of eye pattern c. Height of the eye opening of eye pattern	L2

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	<p>d. All of the above</p> <p>d. BW $1/2 v f_m$</p>	
8	<p>For a noise to be white Gaussian noise, the optimum filter is known as</p> <p>a. Low pass filter b. Base band filter c. Matched filter d. Bessel filter</p>	L1
9	<p>Matched filters are used</p> <p>a. For maximizing signal to noise ratio b. For signal detection c. In radar d. All of the above</p>	L1
10	<p>The number of bits of data transmitted per second is called</p> <p>a. Data signaling rate b. Modulation rate c. Coding d. None of the above</p>	L3
11	<p>Pulse shaping is done</p> <p>a. to control Inter Symbol Interference b. by limiting the bandwidth of transmission c. after line coding and modulation of signal d. All of the above</p>	L2
12	<p>The criterion used for pulse shaping to avoid ISI is</p> <p>a. Nyquist criterion b. Quantization c. Sample and hold d. PLL</p>	L3
13	<p>The filter used for pulse shaping is</p> <p>a. Raised – cosine filter b. Sinc shaped filter c. Gaussian filter d. All of the above</p>	L1
14	<p>Roll – off factor is defined as</p> <p>a. The bandwidth occupied beyond the Nyquist Bandwidth of the filter b. The performance of the filter or device c. Aliasing effect d. None of the above</p>	L1

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15	<p>Nyquist criterion helps in</p> <p>a. Transmitting the signal without ISI b. Reduction in transmission bandwidth c. Increase in transmission bandwidth d. Both a and b</p>	L2
16	<p>The difficulty in achieving the Nyquist criterion for system design is</p> <p>a. There are abrupt transitions obtained at edges of the bands b. Bandwidth criterion is not easily achieved c. Filters are not available d. None of the above</p>	L3
17	<p>Equalization in digital communication</p> <p>a. Reduces inter symbol interference b. Removes distortion caused due to channel c. Is done using linear filters d. All of the above</p>	L1
18	<p>Zero forced equalizers are used for</p> <p>a. Reducing ISI to zero b. Sampling c. Quantization d. None of the above</p>	L5
19	<p>The transmission bandwidth of the raised cosine spectrum is given by</p> <p>a. $B_t = 2w(1 + \alpha)$ b. $B_t = w(1 + \alpha)$ c. $B_t = 2w(1 + 2\alpha)$ d. $B_t = 2w(2 + \alpha)$</p>	L1
20	<p>Matched filter may be optimally used only for</p> <p>a. Gaussian noise b. Transit time noise c. Flicker d. All of the above</p>	L1
21	<p>Characteristics of Matched filter are</p> <p>a. Matched filter is used to maximize Signal to noise ratio even for non Gaussian noise b. It gives the output as signal energy in the absence of noise c. They are used for signal detection d. All of the above</p>	L2
22	<p>Matched filters may be used</p> <p>a. To estimate the frequency of the received signal</p>	L3

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		b. In parameter estimation problems c. To estimate the distance of the object d. All of the above					
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		Matched filter provides _____ signal to noise ratio. a) Maximum b) Minimum c) Zero d) Infinity	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="text-align: center;">L1</td></tr> <tr><td style="text-align: center;">L3</td></tr> <tr><td style="text-align: center;">L2</td></tr> <tr><td style="text-align: center;">L3</td></tr> </table>	L1	L3	L2	L3
L1							
L3							
L2							
L3							
26		The impulse response of the filter is the _____ of the mirror image of the signal waveform. a) Delayed version b) Same version c) Delayed & Same version d) None of the mentioned	L3				
27		Example for antipodal bandpass signaling is a) BPSK b) ASK c) FSK d) MSK	L2				
28		Equalization method which is done by tracking a slowly time varying channel response is	L3				

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	a) Preset equalization b) Adaptive equalization c) Variable equalization d) None of the mentioned	
29	For AWGN, the noise variance is a) N_0 b) $N_0/2$ c) $2N_0$ d) $N_0/4$	L1
30	The method using which the error propagation in duobinary signalling can be avoided is a) Filtering b) Precoding c) Postcoding d) None of the mentioned	L3
31	In precoding technique, the binary sequence is _____ with the previous precoded bit. a) And-ed b) Or-ed c) EXOR-ed d) Added	L2
32	The duobinary filter, $H_e(f)$ is called as a) Sine filter b) Cosine filter c) Raised cosine filter d) None of the mentioned	L3
33	The method which has greater bandwidth efficiency is called as a) Duobinary signalling b) Polybinary signalling c) Correlative coding d) All of the mentioned	L2