BHARATI VIDYAPEETH'S COLLEGE OF ENGINEERING

(Approved by AICTE, New Delhi & Affiliated to Guru Gobind Singh Indraprastha University, Delhi)
(An ISO 9001:2015 Certified Institution)
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Department of Electronics and Communication Engineering

Student Name_____ **Enroll. No**_____

Semester: **V sem** **Date:** _____

Course Code. : **ETEC303** **Course Title: Digital Communication**

Quiz/Test No.: **03** **Marks Obtained**_____

Max. Marks : **01** **Evaluator's Sign**_____

Q1. The minimum Nyquist bandwidth for the rectangular spectrum in raised cosine filter is (0.1)

a) $2T_b$ b) $1/2T_b$ c) T^2 d) $2/T_b$

Q2. If each pulse of the sequence is to be detected is in _____ shape, the pulse can be detected without ISI.

a) Sine b) Cosine c) Sinc d) None of these (0.1)

Q3. Examples of Nyquist filters are (0.1)

a) Root Raised Cosine filter b) Raised Cosine Filter

c) Root Raised & Raised Cosine filter d) None of these

Q4. The main reason for using Maximum Likelihood detectors is (0.1)

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Q5. The main reason for using Matched filters is (0.1)

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Q6. The overall operation of the Matched filter is the same as that of (0.1)

a) Correlation b) Convolution c) Coherent Reception d) None of these

Q7. For the following line codes, assume the peak positive transmission voltage as +5V and peak negative transmission voltage as -5V (wherever applicable). Transmission bit rate is 10,000 bps. If the probability of error is to be kept at a maximum of 0.01, what would be the tolerable absolute noise power N_o?

Note: $Q(2.325) = 0.01$ (0.2+0.2=0.4)

a) NRZ unipolar b) RZ bipolar

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