Vidya Prasarak Mandal's

Maharshi Parshuram College of Engineering, Velneshwar

*(Affiliated to **University of Mumbai)***

Subject: Digital Communication **Internal assessment-II**
Class: T.E.ExTC **Max. Marks: 20**
Date: 24/10/2018 **Time: 10.00 to 11.00 am**

N.B.:
(1) Question No.1 is **compulsory**.
(2) Figures to the right indicate full marks.

Course Outcomes covered in this Test are as follows:-

CO3 **Students will be able to Evaluate different methods to eliminate Inter-symbol interference.**
CO4 **Students will able to Compare different band-pass modulation techniques.**
CO5 **Students will able to evaluate performance of different error control codes.**

Q. No.		CO#	Questions	Marks	BLL
1	A	CO5	What is the significance of minimum distance in block codes?	2	2
	B	CO4	Explain how QPSK is better than PSK.	2	4
	C	CO4	What is condition for orthogonality of BFSK signal?	2	1
	D	CO3	What do you understand by ISI?	2	2
	E	CO5	What is code rate, code efficiency, systematic & non systematic in the context of linear block code.	2	1
2	A	CO4	How you can design signal space diagram of 16-QASk & Calculate the Euclidean distance & compare with 16-PSK.	5	3
			OR		
	B	CO4	What is M-ary PSK transmitter & plot the spread spectrum & calculate it's B.W.	5	4
3	A	CO5	Design a syndrome calculator for (7,4) Hamming code generated by generator polynomial $1+x+x^2$, if transmitted codeword C=(0111001) & received codeword r=(0110001).	5	6
			OR		
	B	CO5	Generator vector for 1/3 convolutional encoder are g_1=(101), g_2=(100), g_3=(111). Draw encoder diagram & trellis diagram & find the code vector using trellis if message vector is 101100.	5	6