

G. S. Mandal's
Maharashtra Institute of Technology, Aurangabad
 (An Autonomous Institute)
 END SEMESTER EXAMINATION
First Year M.Tech(ETC) -April/May 2022

Course Code : MTE103
Duration : 2 Hrs

Course Name : Advanced Digital Comm. Systems
Max. Marks : 50 **Date : 09/04/2022**

Instructions :

- i) All questions are compulsory
- ii) Assume suitable data wherever necessary and clearly state it
- iii) Figures to the right indicate full marks

Q. 1	Solve/Answer any five (Marks: 10)			
	Questions	Marks	CO	BL
a)	Draw the typical digital communication system	2	1	1
b)	How can BER of a system be improved?	2	1	2
c)	List out the application of GMSK	2	2	1
d)	Write applications of Viterbi algorithm	2	2	1
e)	Draw channel model	2	1	1
f)	Draw block diagram of early-late gate technique	2	4	1
Q. 2	Explain gram Schmidt orthogonalization procedure	8	1	3
Q. 3	Explain how PWM and PPM signals are generated. Explain the concept of PWM and PAM	8	2	3
Q. 4	What is synchronization? Explain the minimum mean square error method.	8	3	3
Q. 5	With the help of duobinary signalling construct decoder	8	3	4
	OR			
Q.5	Describe ISI? Write about different techniques for minimising it. Write anyone.	8	3	2
Q.6	Describe receiver performance parameters for communication over fading channels	8	4	2
	OR			
Q.6	Elaborate channel capacity with respect to fading.	8	4	2