

THE KAVERY ENGINEERING COLLEGE
(An Autonomous Institution)

B.E/B.TECH DEGREE END SEMESTER THEORY EXAMINATIONS, APRIL-MAY 2025

Fourth Semester

Electronics and Communication Engineering

EC 3491 – COMMUNICATION SYSTEMS

Regulations – 2021

Duration : 3 Hrs

Maximum: 100 Marks

PART – A (ANSWER ALL QUESTIONS) (Marks 10*2=20)

Q.No	Questions	BLT	CO	Marks
1.	Define: Amplitude Modulation.	L1	1	2
2.	List out any two properties of Super heterodyne Receiver.	L1	1	2
3.	Define: Sampling	L1	2	2
4.	Mention the advantages of PCM?	L2	2	2
5.	What do you mean by digital techniques?	L1	3	2
6.	Identify the properties of Viterbi Decoder.	L3	3	2
7.	Identify how the signals are geometrically represented?	L3	4	2
8.	Define: BPSK	L1	4	2
9.	Classify the different demodulation techniques.	L4	5	2
10.	What are band limited channels?	L1	5	2

PART – B (ANSWER ALL QUESTIONS) (Marks 5*16 = 80)

Q.No	Questions	BLT	CO	Marks
11.	a Examine the working principle of DSB modulation with a neat block diagram and compare it with SSB & VSB.	L4	1	16
	Or			
	Explain in detail about SSB signal generation method with relevant sketch.	L4	1	16
12.	a i What are all the characteristics of Gaussian and White noise? Explain.	L1	2	10
	i Show, how the noise in FM signals is eliminated?	L1	2	6
	i			

Or

	b	i	Show and Explain about VSB generation in detail.	L1	2	8
		i		L1	2	8
		i	Recall about Nyquist Criterion in detail.			
13.	a		Develop and explain in detail about differential pulse code modulation.	L3	3	16
			Or			
	b		Develop and explain about Linear block codes.	L3	3	16
14.	a	i	Explain the principle of operation of BPSK & BFSK with state space diagram.	L3	4	16
			Or			
	b	i	Contrast and explain the transmitter & receiver structure of non-coherent receiver synchronization model.	L4	4	8
		i		L2	4	8
		i	Explain about, What is adjacent channel power?			
15.	a		Explain about Coherent communication with waveforms using neat sketch.	L2	5	16
			Or			
	b		Explain about Baseband Pulse Transmission with neat sketch.	L2	5	16