

1.A.	Define modulation index with an example.			2Marks	CO3	3	2
1.B.	Differentiate amplitude and frequency modulation with neat sketches.			2Marks	CO3	3	2
1.C.	Mention few advantages of FM over AM.			2Marks	CO3	3	2
1.D.	Differentiate low level and high-level modulation.			2Marks	CO4	4	2
1.E.	List the requirements of AM broadcast transmitters.			2Marks	CO4	4	2
1.F.	Explain the function of buffers in AM radio transmitters.			2Marks	CO4	4	2
2.	Answer the questions			16Marks	CO4	4	2
2.A.	Derive the amount of power embodied in the carrier, side bands in an amplitude modulated wave, also calculate transmission efficiency.			4Marks	CO3	3	3
2.B.	Describe amplitude modulation phenomenon with only two side bands and suppressed carrier			4Marks	CO3	3	3
2.C.	Discuss the design of a tuned radio frequency receiver with neat block diagram.			4Marks	CO4	4	3
2.D.	Elaborate the significance of IF section in a typical radio receiver.			4Marks	CO4	4	3
3.	Answer the questions	choice Q-4		11Marks	CO3	3	2
3.A.	Explain the need of Modulation with suitable examples.			5Marks	CO3	3	2
3.B.	Using dual-slope detector illustrate the demodulation process of FM wave.			6Marks	CO3	3	3

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4.	Answer the questions			11Marks	CO3	3	3
4.A.	Discuss about the envelope detector to detect AM wave with suitable example.			5Marks	CO3	3	2
4.B.	Choose a linear diode and construct a demodulator for extracting information signal from the modulated signal.			6Marks	CO3	3	3
5.	Answer the questions	choice Q-6		11Marks	CO4	4	2
5.A.	Differentiate AM broadcasting and FM broadcasting with suitable examples.			5Marks	CO4	4	2
5.B.	Illustrate how the intermediate frequency is chosen for a radio receiver.			6Marks	CO4	4	3
6.	Answer the questions			11Marks	CO4	4	3
6.A.	Explain the indirect method of FM transmitter with the help of a block diagram and illustrate the significance of each block.			5Marks	CO4	4	2
6.B.	Explain the working principle of AM superheterodyne receiver with the help of neat block diagram			6Marks	CO4	4	3