Reg.No:							

SNS College of Technology, Coimbatore-35.
(An Autonomous Institution)
B.E/B.Tech- Internal Assessment -I
Academic Year 2023-2024 (Odd Semester)
Fifth Semester
Electronics & Communication Engineering
19ECB301 Analog and Digital Communication

B

Time: $1^{1/2}$ Hours **Maximum Marks: 50**

Answer All Questions

PART - A (5x 2 = 10 Marks)

		CO	Blooms
1.	AM Radio Channel bandwidth is 10kHz.What is the maximum modulation frequency?	CO1	App
2.	Define Modulation.	CO1	Rem
3.	Summarize AM,FM and PM.	CO1	Und
4.	Differentiate AM and FM Broadcast receivers.	CO2	Ana
5.	What do you meant by Intermediate Frequency?	CO2	Rem

PART – B (2*13=26 Marks)(1*14=14 Marks)

				CO	Blooms
6.	(a)	An audio frequency signal $10\sin 2\pi*500t$ is used to amplitude modulate a carrier of $50\sin 2\pi*10^5t$ Calculate a) Modulation index b) Side band frequencies c)Amplitude of each sideband frequencies d) Bandwidth required e) Total power delivered to the load of 600	13	CO1	App
		(or)			
	(b)	Explain the generation of DSBSC wave using balanced modulator method with necessary block diagram and its applications.	13	CO1	Und
7.	(a)	Apply and discuss the factors influencing the choice of intermediate frequency for a radio receiver.	13	CO2	App

		(or)			
	(b)	Explain the operation of AM Super heterodyne receiver with its characteristics.	13	CO2	Und
8.	(a)	Derive the expression of AM wave with its frequency spectrum and bandwidth and also draw its waveform.	14	CO1	App
		(or)			
	(b)	Examine the drawbacks of TRF receiver and explain the block diagram of double conversion receiver with its working.	14	CO2	Ana

Abbreviations:

CO – Course Outcomes; **Rem-** Remembering; **Und –** Understanding; **App –** Applying; **Ana –** Analyzing; **Eva –** Evaluating; **Cre**- Creating