

## DEPARTMENT OF ELECTRONICS & TELECOMMUNICATION ENGINEERING

ACADEMIC LESSION PLA	N FOR WINTER SEMESTER 2022- 23
JHARSUGUDA ENGIN	EERING SCHOOL,JHARSUGUDA
Name of the Faculty: RAJENDRA DORA	Academic Year:2022-23
Course No.: TH-3	Course Name: ANALOG AND DIGITAL
Program: Diploma	COMMUNICATION Branch: ELECTRONICS &
Year/Sem: 3rd / 5th	TELECOMMUNICATION Section: A
Total Period s: 75 P/ Sem	End Semester Exam: 80marks
Internal Assessment : 20 Marks	TOTAL MARKS :100 Marks

Sl. No.	Period	Time (min)	Unit/ Chapter	Topic to be covered	Teaching method
1.	1.	55	1	Elements of Communication Systems.	Black board
2.	2.	55	1	Communication Process- Concept of Elements of Communication System & its Block diagram	Black board
3.	3.	55	1	Source of information & Communication Channels.	Black board
4.	4.	55	1	Classification of Communication systems - Line & Wireless	Black board
5.	5.	55	1	Classification of Communication systems -Radio	Black board
6.	6.	55	1	Modulation Process, Need of modulation and classify modulation process	Black board
7.	7.	55	1	Analog and Digital Signals & its conversion.	Black board
8.	8.	55	1	Basic concept of Signals & Signals classification - Analog	Black board
9.	9.	55	1	Basic concept of Signals & Signals classification - Digital	Black board
10.	10.	55	1	Bandwidth limitation	Black board
11.	11.	55	2	Amplitude (linear) Modulation System	Black board
12.	12.	55	2	Amplitude modulation & derive the expression for amplitude modulation signal	Black board
13.		55	2	Power relation in AM wave	Black board
14.	14.	55	2	find Modulation Index	Black board
15.	15.	55	2	Generation of Amplitude Modulation(AM)- Linear level AM modulation only	Black board

level AM modulation only	16.	16.	55	2	Generation of Amplitude Modulation(AM)- Linear	Black board
17. 17. 55 2 Demodulation of AM waves -liner diode detector Black board 19. 19. 19. 55 2 Demodulation of AM waves -square law detector Black board 20. 20. 55 2 Explain SSB signal and DSBSC signal Black board 21. 21. 55 2 Methods of generating & detection SSB-SC signal Black board (Indirect method only) Methods of generation DSB-SC signal (Ring Modulator) Black board Methods of generation DSB-SC signal (Ring Modulator) Black board detection) Methods of generation DSB-SC signal (Ring Modulator) Black board detection) Methods of generation DSB-SC signal (Ring Modulator) Black board detection) Methods of generation DSB-SC signal (Ring Modulator) Black board detection) Methods of generation DSB-SC signal (Synchronous detection) Modulator) Black board 25. 25. 25. 55 2 Concept of Balanced modulators Black board 26. 26. 55 3 Angle Modulation Systems Black board FM) Black board FM Signal Black board Signal Synchronous Black board FM Signal Signal Synchronous Black board FM Signal Signal Synchronous Black board FM Signal Signal Synchronous Black board Synchronous Black board FM Signal Signal Synchronous Black board Synchronous				1		
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45. 45. 55 5 Concept of Sampling Theorem Black board	45.	45.	55	5		Black board

46.	46.	55			
			5	Nyquist rate & Aliasing	Black board
47.	47.	55	5	Sampling Techniques (Instantaneous, Natural, Flat	Black board
48.	48.	55	5	Top)  Analog Pulse Modulation - Generation and detection of PAM system with the help of Block	Black board
49.	49.	55	5	diagram & comparison of all above.  Analog Pulse Modulation - Generation and	Black board
				detection of PWM system with the help of Block	
50.	50.	55	5	diagram & comparison of all above.  Analog Pulse Modulation - Generation and detection of PPM system with the help of Block	Black board
51.	51.	55	5	diagram & comparison of all above.  Concept of Quantization of signal & Quantization error.	Black board
52.	52.	55	5	Generation of PCM system with Block diagram & its applications	Black board
53.	53.	55	5	Demodulation of PCM system with Block diagram & its applications	Black board
54.	54.	55	5	Companding in PCM & Vocoder	Black board
55.	55.	55	5	Time Division Multiplexing & explain the operation with circuit diagram	Black board
56.	56.	55	5	Generation of Delta modulation with Block diagram.	Black board
57.	57.	55	5	Demodulation of Delta modulation with Block diagram.	Black board
58.	58.	55	5		Black board
59.	59.	55	5	Demodulation of DPCM with Block diagram	Black board
60.	60.	55	5	Comparison between PCM, DM , ADM & DPCM	Black board
61.	61.	55	6	DIGITAL MODULATION TECHNIQUES	Black board
62.	62.	55	6	Concept of Multiplexing (FDM & TDM)- (Basic concept, Transmitter & Receiver)	Black board
63.	63.	55	6		Black board
64.	64.	55	6	Advantages of digital communication system over Analog system	Black board
65.	65.	55	6	6: :: 1	Black board
66.	66.	55	6	Generation and Detection of binary ASK, FSK, PSK	Black board
67.	67.	55	6	Generation and Detection of binary QPSK, QAM	Black board
68.	68.	55	6	Generation and Detection of binary MSK, GMSK	Black board
69.	69.	55	6	Working of T1-Carrier system	Black board
70.	70.	55	6	Connect Court Otto	Black board
71.	71.	55		Working anarotics of C	Black board
72.	72.	55	6	Working anaration of C	Black board
73.	73.	55	6	Define hit Bourd august 10.1	Black board
	74.	55	6	Application of Diff	
74.			10	Application of Different Modulation Schames   r	Black board