Badriprasad Institute of Technology, Sambalpur

Lesson plan for Theory -3, DIGITAL SIGNAL PROCESSING

Semester & Branch : 6TH SEM, ETC Engineering **Total Periods-60**

Name of the faculty : MR. SARTHAK PANDA **No of periods /week-4**

WEEK	CLASS DAY	THEORY
1ST	1ST	BASICS OF SIGNALS, SYSTEMS,& SIGNAL PROCESSING
	2ND	BASIC ELEMENT OF DIGITAL SIGNAL PROCESSING
	3RD	ADVANTAGES OF DIGITAL SIGNAL PROCESSING OVER ANALOG SIGNAL PROCESSING
	4TH	CLASSIFICATION OF SIGNALS
2ND	1ST	CONCEPT OF FREQUENCY IN CONTINOUS AND DISCRETE TIME SIGNAL
	2ND	CONCEPT OF FREQUENCY IN CONTINOUS TIME SINUSOIDAL SIGNALS, DISCRETE TIME SIGNALS
	3RD	ANALOG TO DIGITAL CONVERSION, DIGITAL TO ANALOG CONVERSION
	4TH	SAMPLING OF ANALOG SIGNALS AND SAMPLING THEOREM
3RD	1ST	QUANTIZATION & CODING OF QUANTIZED SAMPLE
	2ND	ANALYSIS OF DIGITAL SYSTEM SIGNALS Vs DISCRETE TIME SIGNALS
	3RD	CONCEPT OF DISCRETE TIME SIGNALS
	4TH	CLASSIFICATION OF DISCRETE TIME SIGNALS
4TH	1ST	DISCRETE TIME SYSTEM- INPUT/OUTPUT SYSTEM
	2ND	BLOCK DIAGRAM OF DISCRETE TIME SYSTEM
	3RD	CLASSIFY DISCRETE TIME SYSTEM
	4TH	INTERCONNECTION OF DISCRETE TIME SYSTEM
5TH	1ST	DISCRETE TIME INVARIANT SYSTEM- DIFFERENT TECHNIQUES FOR THE ANALYSIS OF LINEAR SYSTEM
	2ND	RESOLUTION OF A DISCRETE TIME SIGNALS INTO IMPULSE
	3RD	RESPONSE OF LTI SYSTEM
	4TH	COVOLUTION AND INTERCONNECTION OF LTI SYSTEM
6TH	1ST	STUDY SYSTEMS WITH FINITE DURATION AND INFINITE DURATION IMPULSE RESPONSE
	2ND	RECURSIVE & NON RECURSIVE DISCRETE TIME SYSTEM
	3RD	IMPULSE RESPONSE OF LINEAR TIME INVARIANT RECURSIVE SYSTEM
	4TH	CORRELATION OF DISCRETE TIME SIGNALS
7TH	1ST	Z-TRNSFORM
	2ND	APPLICATION OF Z-TRANSFORM TO LTI SYSTEM
	3RD	DIRECT Z-TRANSFORM
	4TH	INVERSE Z-TRANSFORM
8TH	1ST	PROPERTIES OF Z-TRANSFORM
	2ND	RATIONAL Z-TRANSFORM
	3RD	POLES & ZEROES
	4TH	POLE LOCATION TIME DOMAIN BEHAVOUR FOR CASUAL SIGNALS
9TH	1ST	SYSTEM FUNCTION OF A LINEAR TIME INVARIANT SYSTEM
	2ND	INVERSE Z-TRANSFORM BY PARTIAL FRACTION EXPANSION
	3RD	INVERSE Z-TRANSFORM BY CONTOUR INTEGRATION
	4TH	CONCEPT OF DISCRETE FOURIER TRANSFORM
10TH	1ST	FREQUENCY DOMAIN SAMPLING
	2ND	RECONSTRUCTION OF DISCRETE TIME SIGNALS
	3RD	DISCRETE TIME FOURIER TRANSFORMATION(DTFT)
	4TH	DISCRETE FOURIER TRANSFORMATION(DFT)

Badriprasad Institute of Technology, Sambalpur

Lesson plan for Theory -3, DIGITAL SIGNAL PROCESSING

Semester & Branch : 6TH SEM, ETC Engineering **Total Periods-60**

Name of the faculty : MR. SARTHAK PANDA **No of periods /week-4**

11TH	1ST	COMPUTE DFT AS A LINEAR TRANSFORMATION
	2ND	RELATE DFT TO OTHER TRANSFORMATION
	3RD	PROPERTY OF THE DFT
	4TH	MULTIPLICATION OF TWO DFT & CIRCUAR CONVOLUTION
12TH	1ST	COMPUTE DFT ALGORITHM
	2ND	COMPUTE FFT ALGORITHM
	3RD	DIRECT COMPUTATION OF DFT
	4TH	DIVIDE & CONQUER APPROACH TO COMPUTATION OF DFT
13TH	1ST	RADIX-2 ALGORITHM
	2ND	APPLICATION OF FFT ALGORITHMS
	3RD	INTRODUCTION TO DIGITAL FILTERS
	4TH	FIR FILTERS
14TH	1ST	GENERAL CONSIDERATIONS
	2ND	INTRODUCTION TO DSP ARCHITECTURE
	3RD	FAMILIARISATION OF DIFFERENT TYPES OF PROCESSOR
	4TH	OBJECTIVE TYPE QUESTION DISCUSSION
15TH	1ST	OBJECTIVE TYPE QUESTION DISCUSSION
	2ND	SEMESTER QUESTION DISCUSSION
	3RD	PRACTICE TEST-1
	4TH	PRACTICE TEST-2

Sign of Faculty Sign of HOD