ORISSA SCHOOL OF ENGINEERING & POLYTECHNIC
DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION
LESSON PLAN FOR THE SESSION 2023-24

SUBJECT- DIGITAL SIGNAL PROCESSING
NAME OF THE FACULTY-SIDHARTH KU SETHI

BRANCH-E&TC
SEMESTER-6TH

MODULE	DATE	LECTURE NO.	TOPIC TO BE COVERED
1	14/02/2023	1	BASICS OF SIGNALS , SYSTEMS AND SIGNAL PROCESSING
	16/02/2023	2	COMPARE THE ADVANTAGES OF DIGITAL SIGNAL PROCESSING OVER ANALOG SIGNAL PROCESSING
		3	CLASSIFICATION OF SIGNALS- MULTI CHANNEL AND MULTI DIMENSIONAL SIGNALS CONTINOUS TIME Vs DESCRETE TIME SIGNAL
	20/02/2023	4	CONCEPT OF FREQUENCY IN CONTINOUS TIME & DISCRETE TIME SIGNAL AND DIFFERENT TYPES OF DISCRETE TIME SIGNAL
	21/02/2023	5	ANALOG TO DIGITAL CONVERSION, SAMPLING OF ANALOG SIGNAL AND SAMPLING THEOREM
	23/02/2023	6	QUANTAZISATION OF CONTINOUS AMPLITUDE SIGNAL
		7	CODING OF QUANTIZE SAMPLE , DIGITAL TO ANALOG CONVERSION
	27/02/2023	8	SOLVE PROBLEMS ON BASIC TYPES OF SIGNAL SAMPLING THEOREM
2	28/02/2023	9	CONCEPT OF DISCRETE TIME SIGNAL , ELEMENTARY DISCRETE TIME SIGNAL
	02/03/2023	10	CLASSIFICATION OF DISCRETE TIME SIGNAL
		11	SIMPLE MANIPULATION OF DISCRETE TIME SIGNAL & DISCRETE TIME SYSTEM , I/O OF SYSTEM
	06/03/2023	12	BLOCK DIAGRAM OF DISCRETE TIME SYSTEM & CLASSIFIED DISCRETE TIME SYSTEM
	09/03/2023	13	INTERCONNECTION OF DISCRETE TIME SYSTEM
		14	DISCRETE TIME INVARIANT SYSTEM
	13/03/2023	15	RESOLUTION OF A DISCRETE TIME SIGNAL INTO IMPULSE
	14/03/2023	16	RESPONSE OF LTI SYSTEM TO ARBITARY INPUTS USING CONVOLUTION SUM
	16/03/2023	17	CONVOLUTION & INTER CONNECTION OF LTI SYSTEM
		18	PROPERTIES OF LTI SYSTEM
	18/03/2023	19	NUMERICALS ON CONVOLUTION AND PROPERTIES OF LTI SYSTEM
	20/03/2023	20	STUDY SYSTEMS WITH FINITE DURATION AND INFINITE DURATION OF IMPULSE RESPONSE
	21/03/2023	21	DISCRETE TIME SYSTEM AND DECRIBED BY DIFFERENCE EQUATION, RECURSIVE & NONRECURSIVE DISCRETE TIME SYSTEM
	23/03/2023	22	DETERMINE THE IMPULSE RESPONSE OF LINEAR TIME INVARIANT RECURSIVE SYSTEM
		23	CO-RELATION OF DISCRETE TIME SIGNAL

	27/03/2023	24	SOLVED NUMERICALS
3	28/03/2023	25	INTRODUCTION TO Z-TRANSFORM
	03/04/2023	26	DIRECT Z-TRANSFORM
	04/04/2023	27	FINDING DIRECT Z-TRANSFORM OF FINITE AND INFINITE DURATION DISCRETE TIME SIGNAL
	06/04/2023	28	DEFINE REGION OF CONVERGENCE AND PROPERTIES OF REGION OF CONVERGENCE
		29	PROPERTIES OF Z-TRANSFORM
	10/04/2023	30	PROPERTIES OF Z-TRANSFORM AND SOLVE NUMERICALS USING PROPERTIES OF Z-TRANSFORM
	11/04/2023	31	CONCEPT OF POLES & ZEROS
	13/04/2023	32	POLE LOCATION AND TIME DOMAIN BEHAVIOUR FOR CAUSAL SIGNAL
		33	SYSTEM FUNCTION OF A LINEAR TIME INVARIANT SYSTEM
	17/04/2023	34	SOLVE NUMERICALS ON FINDING SYSTEM FUNCTION FROM DIFFERENCE EQUATION
	18/04/2023	35	DISCUSS INVERSE Z-TRANSFORM AND ITS VARIOUS METHOD
	20/04/2023	36	INVERSE Z-TRANSFORM BY PARTIAL FRACTION EXPANSION
		37	INVERSE Z-TRANSFORM BY CONTOUR INTEGRATION
	24/04/2023	38	SOLVE NUMERICAL ON INVERSE Z-TRANSFORM
4	25/04/2023	40	CONCEPT OF DISCRETE FOURIER TRANSFORM
	27/04/2023	40	FREQUENCY DOMAIN SAMPLING & RECONSTRUCTION OF DISCRETE TIME SIGNAL
		41	DISCRETE FOURIER TRANSFORMATION
	01/05/2023	42	COMPUTE DFT AS A LINEAR TRANSFORMATION
	02/05/2023	43	RELATE DFT TO OTHER TRANSFORM
	04/05/2023	44	PROPERTIES OF DISCRETE FOURIER TRANSFORMATION (DFT)
		45	SOLVE NUMERICALS BY USING PROPERTIES OF DFT
	08/05/2023	46	MULTIPLICATION OF TWO DFT & CIRCULAR CONVOLUTION
	09/05/2023	47	SOLVE NUMERICALS ON CIRCULAR CONVOLUTION
5	10/05/2023	48	COMPUTE DFT & FFT ALGORITHM
	11/05/2023	49	DEVIDE & CONQUER APPROACH TO COMPUTION OF DFT
		50	RADIX- 2 ALGORITHM
	15/05/2023	51	SMALL PROBLEM SOLVE BY USING RADIX-2 ALGORITHM
	16/05/2023	52	APPLICATION OF FFT ALGORITHM ,INTRODUCTION TO DIGITAL FILTERS
	17/05/2023	53	FIR FILTERS & GENERAL CONSIDERATION
	18/05/2023	54	INTRODUCTION TO DSP ARCHITECHURE & FAMILARIZATION OF DIFFERENT TYPES PROCESSOR
		55	CLASS TEST

	20/05/2023	56	CLASS TEST DISCUSSION
	22/05/2023	57	PREVIOUS SEMESTER QUESTION DISCUSSION
		58	PREVIOUS SEMESTER QUESTION DISCUSSION
	23/05/2023	59	MCQ TYPE
		60	MCQ TYPE QUESTION DISCUSSION

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