

Aditya Institute of Technology and Management (Autonomous), Tekkali
III ECE-B, 2016-17 SEM-II

Subject: Digital Signal Processing

Subject Code: 13EC3020

Name of the faculty: Sri. D.Yugandhar

Semester: 6

Branch: ECE

Periods	Date (Tentative)	Topic	Unit No	Teaching Methodology	Remarks	Corrective Action Upon Review
1	05-12-2016	Introduction to DSP, Applications, Advantages of DSP, Building blocks of DSP	I	BB		
2	06-12-2016	Introduction to discrete time signals and sequences		BB		
3	08-12-2016	Classification of discrete time systems		BB		
4	09-12-2016	Representation of differential and difference equations.		BB		
5	13-12-2016	Frequency domain representation of discrete time signals and systems.		BB		
6	14-12-2016	Introduction to discrete Fourier series (DFS), Problems on DFS.		BB		
7	15-12-2016	Properties of DFS		BB		
8	15-12-2016	Properties of DFS, Problems on DFS.		BB		
9	16-12-2016	Problems				
10	20-12-2016	Introduction to Discrete Time Fourier Transform (DTFT) and Discrete Fourier Transform (DFT)	II	BB		
11	22-12-2016	Relation between DTFT and DFT, Properties of DFT		BB		
12	23-12-2016	Linear and Circular Convolution		BB		
13	23-12-2016	Fast Fourier Transform (FFT)		BB		
14	26-12-2016	FFT Computation using Decimation in time(DIT) – Radix 2 FFT algorithm, Problems		BB		
15	27-12-2016	FFT Computation using Decimation in frequency(DIF) – Radix 2 FFT algorithm		BB		
16	30-12-2016	Problems on finding DFT using DIT and DIF algorithms		BB		

17	03-01-17	Introduction to Z-transform, Inverse Z-transform, Properties of Z-transform.		BB		
18	05-01-17	Problems on Z-transform, Relation between Z-transform and DFT.		BB		
19	06-01-17	Problems				
20	10-01-17	Problems				
21	17-01-17	Problems	III			
22	24-01-17	Block diagram representation of linear coefficient difference equation, Transfer function, Zeros and Poles representation.		BB		
23	31-01-17	Introduction to Finite Impulse Response (FIR) and Infinite Impulse Response (IIR) filters, Difference between FIR and IIR systems.		BB		
24	02-02-17	Basic structures of IIR systems		BB		
25	03-02-17	Basic structures of IIR systems Cont., Transposed form of IIR filters.		BB		
26	09-02-17	Design of analog Butterworth Filter		BB		
27	10-02-17	Design of analog Chebyshev Filter		BB		
28	14-02-17	Frequency transformation in analog domain		BB		
29	15-02-17	Design of IIR digital filters using impulse invariance technique and bilinear transformation.		BB		
30	16-02-17	Prewarping, Problems on realization techniques		BB		
31	21-02-17	Problems - Solutions		BB		
32	28-02-17	Problems - Solutions		BB		
33	02-03-17	Introduction to structures of FIR filters	IV	BB		
34	03-03-17	Introduction to structures of FIR filters Cont.		BB		
35	03-03-17	Amplitude and phase response of FIR filter		BB		
36	07-03-17	Amplitude and phase response of FIR filter Cont.		BB		
37	11-03-17	Design of FIR filter using Fourier Series method.		BB		
38	14-03-17	Problems on Linear phase FIR filter, Gibbs phenomenon. Design of FIR filter using windowing techniques – Hamming.		BB		
39	15-03-17	Design of FIR filter using windowing techniques – Hanning and Blackmann windows		BB		

40	16-03-17	Design of FIR filter using Frequency Sampling method	V	BB		
41	21-03-17	Problems		BB		
42	23-03-17	Problems.		BB		
43	24-03-17	Introduction to Multirate signal processing, Decimation (Down sampling), Interpolation (Up sampling)		BB		
44	27-03-17	Multistage implementation of sampling rate conversion		BB		
45	27-03-17	Problems on Sampling rate conversion, Applications of Multirate signal processing		BB		
46	28-03-17	Introduction to P-DSP Processors, Bus architecture, Pipe line concepts.		BB		
47	30-03-17	Addressing modes of P-DSP		BB		
48	31-03-17	On chip peripherals,.		PPT		
49	31-03-17	CISC & RISC architectures		PPT		
50	03-04-16	Architecture of 320C5X DSP, Register Set.		PPT		
51	03-04-16	On chip peripheral of 320C5X DSP		PPT		
52	04-04-16	On chip peripheral of 320C5X DSP Cont.		PPT		
53	06-04-17	Advance concepts		BB/PPT		
52	07-04-17	Advance concepts		BB/PPT		

Signature of the faculty

Signature of HOD/ECE