Lesson Plan

Name of the Institute :	CVRP
Department :	ETC
Semester/Division/Branch :	6th/ETC
Subject Name with code :	DIGITAL SIGNAL PROCESSING TH.-3
Total No. of Class (Required)	60
Faculty Name :	SUCHISMITA SATPATHY

Class No.	Brief Description of the Topic/Chapter to be taught	Remarks
1	Introduction to the subject	
2	Basic elementS of a digital signal processing system.	
3	Compare the advantages of digital signal processing over analog signal processing.	
4	Classification of signals,Multi channel&Multi dimensional signals.	
5	Continuous time verses Discrete -times Signal,Continuous valued verses Discrete valued signals.	
6	Continuous-time sinusoidal signals.Discrete-time sinusoidal signals. Harmonically related complex exponential.	
7	Sampling of Analog signal,The sampling theorem.	
8	Sampling of Analog signal,The sampling theorem.	
9	Quantization of continuous amplitude signals,Coding of quantized sample.	
10	Digital to analog conversion.Analysis of digital systems signals vs. discrete time signals systems.	
11	Digital to analog conversion.Analysis of digital systems signals vs. discrete time signals systems.	
12	Doubt Clearing class of Chapter-1	
13	Doubt Clearing class of Chapter-1	
14	Discuss some elementary discrete time signals.Classify discrete time signal.	
15	Discuss simple manipulation of discrete time signal.	
16	Describetionof input-output of system.Draw block diagram of discrete- time systems.	
17	Classify discrete time system.Discuss inter connection of discrete -time system.	

18	Discussion of different technique for the analysis of linear system.Discussion of the resolution of a discrete time signal in to impulse.	
19	Discussion of differenttechnique for the analysis of linear system.Discussion of the resolution of a discrete time signal in to impulse.	
20	Discuss the response of LTI system to arbitrary I/Ps using convolution theorem.	
21	Discuss the response of LTI system to arbitrary I/Ps using convolution theorem.	
22	Explain the properties of Convolution & interconnection of LTI system.	
23	Study systems with finite duration and infinite duration impulse response.	
24	Study systems with finite duration and infinite duration impulse response.	
25	Explain recursive & non-recursive discrete time system.	
26	Determine the impulse response of linear time invariant recursive system.	
27	Doubt Clearing class of Chapter-2	
28	Doubt Clearing class of Chapter-2	
29	Discuss Z-transform & its application to LTI system. State & explain direct Ztransform.	
30	Discuss Z-transform & its application to LTI system. State & explain direct Ztransform.	
31	Problems of Z-Transform.	
32	State & explain inverse Z-transform.	
33	Discuss various properties of Z-transform.	
34	Discuss rational Z-transform,Explain poles & zeros.	
35	Determine pole location time domain behavior for casual signals.	
36	Describe the system function of a linear time invariant system.	
37	Discuss inverse Z-transform.	
38	Determine inverse Z-transform by partial fraction expansion.	
39	Doubt Clearing class of Chapter-3	

40	Doubt Clearing class of Chapter-3	
41	Determine inverse Z-transform by partial fraction expansion.	
42	Discuss discrete Fourier transform.Determine frequency domain sampling and reconstruction of discrete time signals.	
43	Discuss discrete Fourier transform.Determine frequency domain sampling and reconstruction of discrete time signals.	
44	State & Explain Discrete Time Fourier transformation(DTFT)	
45	State & explain Discrete Fourier transformation (DFT).	
46	Compute DFT as a linear transformation.	
47	Relate DFT to other transforms.	
48	Discuss the property of the DFT.	
49	Explain multiplication of two DFT & circular convolution.	
50	Doubt Clearing class of Chapter-4	
51	Doubt Clearing class of Chapter-4	
52	Compute DFT & FFT algorithm.	
53	Explain direct computation of DFT.	
54	Discuss the radix-2 algorithm. (Small Problems)	
55	Introduction to digital filters.(FIR Filters)	
56	Introduction to DSP architecture, familarsation of different types of processor.	
57	Doubt Clearing class of Chapter-5	
58	Doubt Clearing class of Chapter-5	
59	Previous Year Semester Question discussion	
60	Previous Year Semester Question discussion	

Sign. of Faculty   Sign. of H.O.D