

# ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT

## ELECTRONICS AND COMMUNICATIONS ENGINEERING

### LESSON PLAN

**Subject Code & Name: 13EC2010 & PDC**

**Branch: E.C.E-C**

**Class / Semester: II/II**

**Academic Year:2016-17**

Period	Date (Tentative)	Topic	Unit No.	Teaching Methodology	Remarks	Corrective Action upon Review
1.	05-12-2016	<b>Linear wave shaping:</b> High pass, low pass RC circuits	I	Chalk & Board		
2.	06-12-2016	Response of high pass and low pass RC circuit for sinusoidal	I	„		
3.	07-12-2016	Step, pulse	I	„		
4.	08-12-2016	Square and ramp inputs	I	„		
5.	13-12-2016	RC circuit as differentiator, integrator	I	„		
6.	14-12-2016	Attenuator	I	„		
7.	15-12-2016	RL and RLC circuits	I	„		
8.	19-12-2016	Response for step input	I	„		
9.	20-12-2016	Ringing circuit	I	„		
10.	21-12-2016	Problems	I	„		
11.	22-12-2016	<b>Non – Linear Wave Shaping:</b> Diode clippers	II	Chalk & Board		
12.	26-12-2016	Diode clippers	II	„		
13.	27-12-2016	Diode clippers	II	„		
14.	28-12-2016	Transistor clippers	II	„		
15.	29-12-2016	clipping at two independent levels	II	„		
16.	02-01-2017	Transfer characteristics of clippers	II	„		
17.	03-01-2017	Emitter coupled clipper	II	„		
18.	04-01-2017	Comparators, applications of voltage comparators	II	„		
19.	05-01-2017	Clamping operation	II	„		
20.	09-01-2017	Clamping circuits using diode with different inputs	II	„		
21.	17-01-2017	Clamping circuits using diode with different inputs	II	„		
22.	18-01-2017	Clamping circuit theorem	II	„		
23.	23-01-2017	Practical clamping circuits	II	„		
24.	24-01-2017	Effect of diode characteristics on clamping voltage	II	„		
25.	25-01-2017	Transfer characteristics of	II	„		

		clampers				
26.	30-01-2017	Problems	II	„		
27.	31-01-2017	<b>Switching Characteristics of Devices:</b> Diode and transistor as switches	III	Chalk & Board		
28.	01-02-2017	Break down voltage consideration of transistor	III	„		
29.	02-02-2017	Saturation parameters of Transistor and their variation with temperature	III	„		
30.	06-02-2017	Design of transistor switch	III	„		
31.	07-02-2017	Transistor-switching times, Junction switching time	III	„		
32.	08-02-2017	Analysis and design of Bistable Multivibrators	III	„		
33.	09-02-2017	Fixed bias and self biased transistor binary circuits	III	„		
34.	13-02-2017	Fixed bias and self biased transistor binary circuits	III	„		
35.	14-02-2017	Commutating capacitors, triggering in binary	III	„		
36.	15-02-2017	Schmitt trigger	III	„		
37.	16-02-2017	Applications	III	„		
38.	20-02-2017	<b>Monostable and Astable Multivibrators:</b> Analysis and design of monostable multivibrator	IV	Chalk & Board		
39.	21-02-2017	Collector-coupled monostable multivibrator	IV	„		
40.	22-02-2017	Emitter-coupled monostable multivibrator	IV	„		
41.	23-02-2017	Triggering in monostable multivibrator	IV	„		
42.	27-02-2017	Analysis and design of astable multivibrator	IV	„		
43.	28-02-2017	<b>Time Base Generators:</b> General features of a time base signal	IV	„		
44.	06-03-2017	Methods of generating time base waveform	IV	„		
45.	07-03-2017	Miller time base generator	IV	„		
46.	08-03-2017	Bootstrap time base generator	IV	„		
47.	09-03-2017	Transistor miller time base generator	IV	„		
48.	14-03-2017	Transistor Bootstrap time base generator	IV	„		
49.	15-03-2017	<b>Blocking Oscillators:</b>	V	Chalk & Board		

		Monostable blocking oscillator Base timing				
50.	16-03-2017	Emitter timing	V	„		
51.	20-03-2017	Astable blocking oscillator diode controlled	V	„		
52.	21-03-2017	RC controlled, Applications	V	„		
53.	22-03-2017	<b>Sampling Gates:</b> Basic operating principles of sampling gates	V	„		
54.	23-03-2017	Unidirectional sampling gates	V	„		
55.	27-03-2017	Bi-directional sampling gates	V	„		
56.	29-03-2017	Bi-directional sampling gates	V	„		
57.	30-03-2017	Reduction of pedestal in Gate circuits	V	„		
58.	03-04-2017	Four diode sampling gates, Applications sampling gates	V	„		
59.	04-04-2017	Revision, problems		„		
60.	06-04-2017	Old question paper revision		„		

### **Text Books:**

1. Pulse, Digital and switching waveforms – J.Millman and H.Taub, McGraw-Hill, 1991.
2. Pulse and Digital Circuits – Venkata Rao K., Ramasuda K., Manmadharao G., Pearson Education, 2010.

### **Reference Books:**

1. Digital Logic state machine design – Dacid J. Comer, Oxford University Press, 2008, 3/e.
2. Pulse and Digital Circuits – MS Prakash Rao, Tata McGrawHill..

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