PANIPAT INSTITUTE OF ENGINEERING AND TECHNOLOGY
PANIPAT
Department of Mechanical Engineering
LESSON PLAN

Subject Name: -Basic Electronics Engg **Branch/Semester: 3rd SEM**
Subject Code: - ES-203A

S.No.	Lecture No.	Topics to be covered	Remarks
1.	L1	Introduction to P-N junction Diode	
2.	L2	V-I characteristics of P-N junction Diode	
3.	L3	Half wave Rectifier	
4.	L4	Full-wave rectifiers	
5.	L5	Capacitor filter, Zener diode and its characteristics	
6.	L6	Zener diode as voltage regulator	
7.	L7	BJT structure, its input-output and transfer characteristics	
8.	L8	BJT as a Common Emitter amplifier	
9.	L9	frequency response and bandwidth	
10.	L10	Introduction to operational amplifiers, inverting	
11.	L11	Non-inverting and differential modes	
12.	L12	Basic parameters of Op-amp	
13.	L13	Op-amp in open loop configuration	
14.	L14	Study of practical op-amp IC 741	
15.	L15	Op-amp applications: adder, subtractor	
16.	L16	Scale changer, averaging amplifier, comparator	
17.	L17	Integrator and Differentiator	

18.	L18	IC 555 timer pin diagram	
19.	L19	Astable and mono-stable operation, Barkhausen's criteria for oscillations	
20.	L20	R-C phase shift and Wein bridge oscillators using BJT and their frequency of oscillation	
21.	L21	R-C phase shift and Wein bridge oscillators using Op-Amp and their frequency of oscillation	
22.	L22	Difference between analog and digital signals	
23.	L23	Boolean algebra	
24.	L24	Basic Gates, Symbols, Truth tables, logic expressions	
25.	L25	Universal Gates, Symbols, Truth tables, logic expressions	
26.	L26	Numerical Practice	
27.	L27	Logic simplification using K- maps	
28.	L28	Numerical Practice	
29.	L29	Numerical Practice	
30.	L30	Logic ICs, half and full adder	
31.	L31	Multiplexers (2:1, 4:1, 8:1 and 16:1) and multiplexer tree	
32.	L32	De-multiplexers	
33.	L33	Flip-flops (RS and D Type)	
34.	L34	flip-flops (T and JK Type)	
35.	L35	Basic counters	
36.	L36	The elements of communication system,	
37.	L37	Transmission media: wired and wireless,	
38.	L38	Need of modulation, AM and FM modulation schemes	

39.	L39	Mobile communication systems: cellular concept	
40.	L40	Block diagram of GSM system.	

(COURSE INCHARGE)