

LESSON PLAN	
JHARSUGUDA ENGINEERING SCHOOL, JHARSUGUDA	
Name of the Faculty: JYOTI R NAYAK	Academic Year: 2021-22
Course No.: Th-1	Course Name: ENERGY CONVERSION -1
Programme: Diploma	Branch:-Electrical
Year/Sem: II / I V	

Sl. No.	Period	Time (min)	Unit	Topic to be Covered	Teaching Method
1.	1.	55 min	1	Operating principle of generator, construction Feature	Black board
2.	2.	55 min	1	Simple lap winding, wave winding	Black board
3.	3.	55 min	1	Types of d.c machine, derivation of emf equation of d.c generator.	Black board
4.	4.	55 min	1	Problems on d.c generator	Black board
5.	5.	55 min	1	Losses and efficiency , condition for maximum efficiency and problems	Black board
6.	6.	55 min	1	Armature reaction in d.c machine	Black board
7.	7.	55 min	1	commutation	Black board
8.	8.	55 min	1	Characteristic of d.c generator	Black board
9.	9.	55 min	1	Application of types of d.c generators.	Black board
10	10.	55 min	1	Concept of critical resistance and critical speed	Black board
11	11.	55 min	1	Parallel operation of d.c generator	Black board
12	12.	55 min	1	Uses of d.c generator	Black board
13	13.	55 min	2	D.C motor working principle, significance of back e.m.f	Black board
14	14.	55 min	2	Voltage equation of D.C motor	Black board
15	15.	55 min	2	Derive torque equation, problems	Black board
16	16.	55 min	2	Characteristic of series, shunt, compound motors	Black board
17	17.	55 min	2	Starting method of series, shunt and compound motor	Black board
18	18.	55 min	2	Speed control of d.c series motor	Black board
19	19.	55 min	2	Speed control of d.c shunt motor	Black board
20	20.	55 min	2	Brake test method	Black board
21	21.	55 min	2	Swinburne's test method	Black board
22	22.	55 min	2	Losses efficiency and uses of D.C motor	Black board
23	23.	55 min	3	Introduction and working principle of transformer	Black board

24	24.	55 min	3	Constructional feature of transformer	Black board
25	25.	55 min	3	Care and maintenance of transformer	Black board
26	26.	55 min	3	E.m.f equation of transformer	Black board
27	27.	55 min	3	No load condition, on load condition phasor diagram	Black board
28	28.	55 min	3	Equivalent resistance, leakage reactance and impedance of transformer	Black board
29	29.	55 min	3	problems	Black board
30	30.	55 min	3	Exact voltage drop calculation	Black board
31	31.	55 min	3	Regulation of transformer	Black board
32	32.	55 min	3	Losses in transformer	Black board
33	33.	55 min	3	Open circuit test, short circuit test	Black board
34	34.	55 min	3	Problems in open and short circuit test	Black board
35	35.	55 min	3	Explain efficiency of different load and power factor	Black board
36	36.	55 min	3	Condition of maximum efficiency	Black board
37	37.	55 min	3	All day efficiency in transformer	Black board
38	38.	55 min	3	Determination of load corresponding to maximum efficiency	Black board
39	39.	55 min	3	Parallel operation of single phase transformers	Black board
40	40.	55 min	4	Construction of auto transformer	Black board
41	41.	55 min	4	Working principle of auto transformer	Black board
42	42.	55 min	4	Comparison of auto transformer with two winding transformer	Black board
43	43.	55 min	4	Uses of auto transformer	Black board
44	44.	55 min	4	Explain tap changer with transformer on load condition	Black board
45	45.	55 min	4	Off load condition	Black board
46	46.	55 min	5	Explain current transformer	Black board
47	47.	55 min	5	Potential transformer	Black board
48	48.	55 min	5	Ratio error, phase angle error, burden	Black board
49	49.	55 min	5	Uses of C.T and P.T	Black board
50	50.	55 min		REVISION	Black board
51	51.	55 min		REVISION	Black board
52	52.	55 min		REVISION	Black board
53	53.	55 min		REVISION	Black board

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56	56.	55 min		REVISION	Black board
57	57.	55 min		REVISION	Black board
58	58.	55 min		REVISION	Black board
59	59.	55 min		REVISION	Black board
60	60.	55 min		REVISION	Black board