

LESSON PLAN

DEPARTMENT OF ELECTRICAL ENGINEERING, ITT, CHOUDWAR

SUBJECT: Elements of Mechanical Engineering **Periods:** 4 period per week **SEMESTER:** 3rd

NAME OF FACULTY: *SOHEB KHAN, LECTURER (MECH)*

No. of weeks: 15

Sl. No.	Period	Time (min)	Unit	Topic to be Covered	Teaching Method
1.	1.	55min	1	THERMODYNAMICS State and Explain Fundamental theory of thermodynamics	Board
2.	2.	55min	1	State and explain heat & work State unit of heat & work	Board
3.	3.	55min	1	State and explain 1 st law of thermodynamics Solved numerical	Board
4.	4.	55min	1	State laws of perfect gases Solved numerical	Board
5.	5.	55min	1	Determine relationship of sp. Heat of gases at const. volume and const. pressure	Board
6.	6.	55min	1	Solved and practice numerical of thermodynamics	Board
7.	7.	55min	2	PROPERTIES OF STEAM State and explain about steam	Board
8.	8.	55min	2	State and explain p-v, t-s diagram of steam	Board
9.	9.	55min	2	Use steam table for solution of simple numerical.	Board
10	10.	55min	2	Explain total heat of wet, dry, super-heated steam	Board
11	11.	55min	2	Solved numerical	Board
12	12.	55min	3	BOILERS State and explain about boilers	Board
13	13.	55min	3	State types of boilers	Board
14	14.	55min	3	Differentiate about various boiler	Board
15	15.	55min	3	State and explain water tube and fire tube boiler With neat sketch	Board
16	16.	55min	3	Describe Cochran boiler with mountings and accessories With sketch	Board
17	17.	55min	3	Describe Babcock Wilcox boiler with mountings and accessories With sketch	Board
18	18.	55min	3	Describe mountings and accessories	Board
19	19.	55min	3	Give various example of boilers	Board
20	20.	55min	3	Explain the use and application of boilers	Board
21	21.	55min	3	Advantages and disadvantages of boilers	Board
22	22.	55min	4	STEAM ENGINE State and explain about steam engine	Board
23	23.	55min	4	Explain the principle of simple steam engine	Board
24	24.	55min	4	Draw indicator diagram	Board
25	25.	55min	4	Calculate mean effective	Board

26	26.	55min	4	pressure IHP and BHP and mechanical efficacy	Board
27	27.	55min	4	Differentiate between steam engine and steam generator	Board
28	28.	55min	4	Explain advantages and disadvantages of steam engine	Board
29	29.	55min	4	Various application and use of steam engine	Board
30	30.	55 min	4	Comparison with different engine	Board
31	31	55min	4	Solved numerical	Board
32	32	55min	5	STEAM TURBINES State and explain about steam turbine	Board
33	33	55min	5	State and explain about different types of steam turbine	Board
34	34	55min	5	Explain about impulse turbine with diagram	Board
35	35	55min	5	Explain about reaction turbine with diagram	Board
36	36	55min	5	State and explain the various use and application of turbines	Board
37	37	55min	5	Explain Advantages and disadvantages of steam turbines	Board
38	38	55min	6	CONDENSER State and explain about condenser	Board
39	39	55min	6	Explain the function of condenser	Board
40	40	55min	6	State the types condenser	Board
41	41	55min	6	Explain the advantages and disadvantages of condensers	Board
42	42	55min	7	I.C ENGINE State and explain about i.c engine	Board
43	43	55min	7	Explain the 2stroke and 4stroke petrol engine	Board
44	44	55min	7	Explain the 2stroke and 4stroke diesel engine	Board
45	45	55min	7	Differentiate between them	Board
46	46	55min	8	HYDROSTATICS State and explain about hydrostatics	Board
47	47	55min	8	Describe the properties of fluid	Board
48	48	55min	8	Determine pressure at a point	Board
49	49	55min	8	Determine pressure measuring instrument	Board
50	50	55min	8	State and explain the various use of instrument	Board
51	51	55min	9	HYDROKINETICS State and explain about hydrokinetics	Board
52	52	55min	9	Deduce equation of continuity of flow	Board
53	53	55min	9	Explain energy of flowing liquid	Board
54	54	55min	9	Explain the application of the equation	Board
55	55	55min	9	State and explain Bernoulli' theorem	Board
56	56	55min	10	HYDRAULIC DEVICES AND PNEUMATICS State and explain about hydraulic devices	Board
57	57	55min	10	State and explain with neat sketch diagram of intensifier	Board
58	58	55min	10	State and explain with neat sketch diagram of hydraulic lift	Board
59	59	55min	10	State and explain with neat sketch diagram of Accumulator	Board
60	60	55 min	10	State and explain with neat sketch diagram of hydraulic ram	Board

