

## LESSON PLAN

NAME OF FACULTY : MR. MANOJ KUMAR  
 DISCIPLINE : MECHANICAL ENGG.  
 SEMESTER : 4TH  
 SUBJECT : THERMODYNAMICS-II  
 LESSON PLAN DURATION : 16 WEEKS

WORK LOAD (LECTURE/ PRACTICAL) :03 LECTURES/WEEK , PRACTICALS -02 HOURS/WEEK

WEEK	LECTURE NO.	TOPIC	DATE	SIGN. OF TEACHER
1st	1	<b>UNIT I : CHAPTER 1-</b> IC Engines-Introduction and classification Description of Otto Cycle, Diesel Cycle with PV and TS diagram,Working principle of two stroke and four stroke cycle, SI engines and CI engines,		
	2	Location and functions of ,various parts of IC engines and materials used		
	3	Basic terms such as bore, TDC, BDC,stroke, crank throw, piston speed and compression ratio,		
2nd	4	Valve timing diagram for four stroke CI and SI engines,Comparison between SI and CI engines, comparison		
	5	<b>CHAPTER 2-</b> Fuel Supply & Ignition system in Petrol Engine,Concept of carburetion		
	6	Air fuel ratio, mixture required at different conditions and loads on engine		
3rd	7	Simple carburetor and its limitations and application,Working of Solex carburettor		
	8	Description of Petrol Injection System,Description of battery coil And electronic ignition system		
	9	<b>UNIT II : CHAPTER 3-</b> Fuel System of Diesel Engine,Components of fuel supply system of diesel engine		
4th	10	Description and working of fuel feed pump,,		
	11	Fuel injection pump,Fuel injectors and fuel filters		
	12	Types of fuel injection system		
5th	13	<b>CHAPTER 4-</b> Cooling and Lubrication,Function of cooling system in IC engine,Air cooling and water cooling system		
	14	Use of thermostat and radiator ,system of IC engine ,Function		
	15	<b>UNIT III : CHAPTER 5-</b> Testing of IC Engines -Engine power - indicated and brake power		
6th	16	Efficiency - mechanical, thermal. relative and volumetric		
	17	Methods of finding indicated and brake power		
	18	Morse test for petrol engine		
7th	19	Heat balance sheet		
	20	Simple numerical problems		
	21	Concept of pollutants in SI and CI engines		

8th	22	Pollution control, norms for two or four wheelers		
	23	Bharat stage emission standards (BS norms)		
	24	Methods of reducing pollution in ic engines		
9th	25	<b>UNIT IV :CHAPTER 6 - Steam Turbine - Introduction and Main parts</b>		
	26	Introduction of Steam Condensers		
	27	Main parts OF Steam Condensers		
10th	28	Uses and classification of steam turbine		
	29	Construction and working principle of impulse and reaction steam turbines		
	30	Comparison between impulse and reaction steam turbines		
11th	31	governing of steam turbine		
	32	Steam nozzles-types and applications		
	33	Functions of a steam condenser		
12th	34	Elements of condensing plants		
	35	types of steam condenser(surface and jet)		
	36	Comparison between jet and steam condensers		
13th	37	cooling pond and cooling towers		
		<b>UNIT V : CHAPTER 7-Gas turbine and jet propulsion -</b>		
	38	classification of gas turbines		
	39	Open&close cycle gas turbine,comparison of gas turbine with reciprocating IC engine		
14th	40	Application & limitations of gas turbine,Open cycle constant pressure gas turbines		
	41	Closed cycle gas turbine, PV and TS diagram and working ,Principle of RAM jet		
	42	TURBO jet engine , application of Jet engine,Supercharger and turbocharger engine		
15th	43	Revision		
	44	Revision		
	45	Revision		
16th	46	Revision		
	47	Revision		
	48	Revision		