

**Lesson plan Thermal engg -1(2015-16)**  
**Dr.N.Haribabu 2015-16 B.Tech 2<sup>nd</sup> year 2<sup>nd</sup>Sem-A Thermal engineering-1**

Period	date(Tentative)	Topic	Unit No.	Teaching Methodology
1(5 <sup>th</sup> )	22/12/15	Actual cycles and analysis comparision air standard	I	CR
2(6 <sup>th</sup> )	22/12/15	Actual cycles, time loss, heat loss, exhaust blow down	I	CR
3(1 <sup>st</sup> )	23/12/15	Loss due to gas exchange volume efficiency	I	PPT
4(2 <sup>nd</sup> )	23/12/15	Loss due to rubbing friction	I	PPT
5(5 <sup>th</sup> )	29/12/15	Actual and F/A cycles CI engines	I	CR
6(6 <sup>th</sup> )	29/12/15	Introduction to IC engine classifications	I	CR
7(1 <sup>st</sup> )	30/12/15	Working, valve/ port timing diagrams	I	CR
8(2 <sup>nd</sup> )	30/12/15	Air standard, A/F & actual cycles,engine systems	I	CR
9(5 <sup>th</sup> )	5/1/16	Fuel, types, carburetor, injection, ignition	I	PPT
10(6 <sup>th</sup> )	5/1/16	Cooling and lubrication different types	I	PPT
11(1 <sup>st</sup> )	6/1/16	Principle of wankel engine	I	CR
12(2 <sup>nd</sup> )	6/1/16	Fuel feed systems	I	PPT
13(5 <sup>th</sup> )	12/1/16	Combustion in SI engine types	II	PPT
14(6 <sup>th</sup> )	12/1/16	Normal /abnormal	II	PPT
15(1 <sup>st</sup> )	13/1/16	Flame speed - importance and effects of engine variables	II	CR
16(2 <sup>nd</sup> )	13/1/16	Types of abnormal combustion	II	PPT
17(5 <sup>th</sup> )	19/1/16	Pre ignition/ knocking	II	CR
18(6 <sup>th</sup> )	19/1/16	Knocking Tendency causes	II	PPT
19(1 <sup>st</sup> )	20/1/16	Fuel rating	II	PPT
20(2 <sup>nd</sup> )	20/1/16	Anti knockingadditives	II	PPT
21(-)	27/1/16to 30/1/16	1 <sup>st</sup> mid exams		
22(5 <sup>th</sup> )	2/2/16	Combustion chamber requirements	II	CR
23(6 <sup>th</sup> )	2/2/16	Types of c.c in SI engines	II	CR
24(1 <sup>st</sup> )	3/2/16	Combustion in CI engine and stages	III	PPT
25(2 <sup>nd</sup> )	3/2/16	Four stages , Delay period & Importance	III	PPT
26(5 <sup>th</sup> )	9/2/16	Effect of engine variables diesel knock	III	PPT
27(6 <sup>th</sup> )	9/2/16	Need for airmovement suction	III	CR
28(1 <sup>st</sup> )	10/2/16	Compression	III	CR
29(2 <sup>nd</sup> )	10/2/16	Combustion induced turbulence open	III	PPT
30(5 <sup>th</sup> )	16/2/16	Divided combustion chambers and nozzles	III	PPT
31(6 <sup>th</sup> )	16/2/16	Nozzles importance	III	CR
32(1 <sup>st</sup> )	17/2/16	Fuel requirements	III	CR

33(2 <sup>nd</sup> )	17/2/16	Fuel rating	III	CR
34(5 <sup>th</sup> )	23/2/16	Turbulences type of combustion	III	PPT
35(6 <sup>th</sup> )	23/2/16	Testing introduction & performance of IC engine	IV	PPT
36(1 <sup>st</sup> )	24/2/16	Parameters	IV	CR
37(2 <sup>nd</sup> )	24/2/16	Measurement of cylinder pressure	IV	CR
38(5 <sup>th</sup> )	1/3/16	Fuel consumption Air intake, exhaust	IV	CR
39(6 <sup>th</sup> )	1/3/16	Brake power problems	IV	PPT
40(1 <sup>st</sup> )	2/3/16	Friction losses indicated power	IV	PPT
41(2 <sup>nd</sup> )	2/3/16	Performance test	IV	CR
42(5 <sup>th</sup> )	8/3/16	Heat balance sheet	IV	CR
43(6 <sup>th</sup> )	8/3/16	Problems	IV	CR
44(-)	9/3/16to 12/3/16	2 <sup>nd</sup> MID Exams		–
45(5 <sup>th</sup> )	15/3/16	Introduction to compressors	V	PPT
46(6 <sup>th</sup> )	15/3/16	Classification	V	PPT
47(1 <sup>st</sup> )	16/3/16	Positive displacement	V	PPT
48(2 <sup>nd</sup> )	16/3/16	roto dynamic type	V	PPT
49(5 <sup>th</sup> )	22/3/16	Reciprocating compressors working, isothermal effect	V	CR
50(6 <sup>th</sup> )	22/3/16	Volumetric effect, clearance effect	V	CR
51(1 <sup>st</sup> )	23/3/16	Stage compression under cooling work saving of work	V	PPT
52(2 <sup>nd</sup> )	23/3/16	Work condition, stage rotary type	V	PPT
53(5 <sup>th</sup> )	29/3/16	roots, blowers, lyschcolm principle working	V	PPT
54(6 <sup>th</sup> )	29/3/16	Efficiency problems	V	CR
55(1 <sup>st</sup> )	30/3/16	Axial flow compressors details, principles	V	PPT
56(2 <sup>nd</sup> )	30/3/16	Velocity traingles energy transfer	V	CR
57(1 <sup>st</sup> )	6/4/16	Degree of reaction Work done factor	V	PPT
58(2 <sup>nd</sup> )	6/4/16	isentropic efficiency	V	PPT
59(5 <sup>th</sup> )	12/4/16	Pressure rise calculations, polytrophic efficiency	V	PPT
60(6 <sup>th</sup> )	12/4/16	Problems	V	CR
61(-)	13/4/16to 16/4/16	3 <sup>rd</sup> MID Exams	-	–