THERMAL ENGINEERING LAB

Course Code	23ME3551	Year	III	Semester	I
CourseCategory		Branch	Mechanical	Course Type	Lab
Credits	1.5	L-T-P	3-0-0	Pre-requisites	NIL
ContinuousInternal Evaluation:	30	Semester End Evaluation:	70	TotalMarks:	100

Course Outcomes		
Upon successful completion of the course, the student will be ableto		Blooms Level
CO1	Experiment with two stroke and four stroke compression and spark ignition engines for various characteristics.	L3
CO2	Determine flash point, fire point, calorific value of different fuels using various apparatus.	L3
CO3	Perform engine friction, heat balance test, load test of petrol and diesel engines.	L3
CO4	Conduct performance test on petrol and diesel engines	L3
CO5	Perform test and determine efficiency of air compressor	L3

Strength of Correlation between CO – PO , CO- PSO in scale of 1-3- Course Articulation Matrix

CO-PO Mapping	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2
CO-1	1	3				1						1	1
CO-2	2	3				2						3	3
CO-3	2	3				2						3	3
CO-4	2	3				2						3	3
CO-5	2	3				2						3	3

SYLLABUS		
Experiment	Contents	Mapped CO
1	To determine the actual Valve Timing diagram of a four stroke Compression/Spark Ignition Engine.	CO1
2	To determine the actual Port Timing diagram of a two stroke Compression/Spark Ignition Engine.	CO1
3	Determination of Flash & Fire points of Liquid fuels / Lubricants using (i) Pensky Martin's apparatus and (ii) Cleveland's apparatus.	CO2
4	Determination of Viscosity of Liquid lubricants/Fuels using Redwood Viscometer.	CO2

5	Evaluation of engine friction by conducting Morse test on 4-stroke multi cylinder petrol/diesel engine.	CO3
6	To perform the Heat Balance Test on Single Cylinder four Stroke Petrol/Diesel Engine.	CO4
7	To conduct a load test on a single cylinder Petrol/Diesel engine to study its performance under various loads.	CO4
8	Bomb calorimeter.	CO4
9	To conduct a performance test on an air compressor and determine its different efficiencies.	CO5
10	Study of boilers with accessories and mountings	CO5
11	Canradson's carbon residue tester.	CO3
12	Assembly and disassembly of diesel and petrol engines.	CO3