

### FUELS AND IC ENGINES LAB

<b>Course code</b>	20ME3451	<b>Year</b>	II	<b>Semester</b>	II
<b>Course category</b>	Professional Core	<b>Branch</b>	ME	<b>Course Type</b>	Lab
<b>Credits</b>	1.5	<b>L-T-P</b>	0-0-3	<b>Prerequisites</b>	-
<b>Continuous Internal Evaluation</b>	15	<b>Semester End Evaluation</b>	35	<b>Total Marks</b>	50

**Course Outcomes:** Upon successful completion of the course, the student will be able to

CO's	Statement:	Blooms Level	Experiments
CO1	Analyze the calorific values among different types of solid, liquid, and gaseous fuels.	L3	E <sub>1</sub> To E <sub>2</sub>
CO2	Analyze the components of Disassembly and assembly of the engine.	L3	E <sub>3</sub>
CO3	Estimate the residue percentage of a given fuel.	L4	E <sub>4</sub>
CO4	Evaluate the performance of the reciprocating air compressor.	L5	E <sub>5</sub>
CO5	Evaluate the performance of different types of petrol engines and diesel engines.	L5	E <sub>6</sub> To E <sub>12</sub>

#### Contribution of Course Outcomes towards achievement of Program Outcomes & Strength of correlations (3-High, 2: Medium, 1: Low)

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	2		2									3	3
CO2	3	2		2									3	3
CO3	3	2		2									3	3
CO4	3	2		2									3	3
CO5	3	2		2									3	3

Contents	MappedCO
1. Junker's gas calorimeter. 2. Bomb calorimeter.	CO 1
3.Assembly and disassembly of diesel and petrol engines	CO 2
4.Canradson's carbon residue tester.	CO 3
5. Performance of two stage reciprocating air compressor.	CO4
6. Valve timing diagram of 4-stroke diesel engine 7.Port timing diagram of 2-stroke petrol engine. 8. Performance of 4-stroke single cylinder diesel engine. 9.I.C. Engines Air/Fuel Ratio and Volumetric Efficiency. 10. I.C. Engines Heat Balance. 11. Morse test on multi cylinder petrol engine. 12. Retardation test	CO5