

## Energy Resources and Utilization Lab

- 1.1 Course Number: CH203L
- 1.2 Contact Hours: 0-0-2 Credits: 02
- 1.3 Semester-offered: 3<sup>rd</sup> Year- Odd

### 2. List of Experiments:

S. No.	Experiments
1	Demonstration of polymer electrolyte membrane (PEM) fuel cell for energy generation
2	Ultimate analysis of biomass using CHNS analyzer
3	Determination of cloud and pour point using laser scattering technique
4	Determination of calorific value of solid/liquid fuels using bomb calorimeter
5	Determination of flash point and fire point of liquid fuels/lubricants using Pesky Martens test
6	Carbon residue test: liquid fuels
7	Determination of viscosity of liquid lubricants and fuels using Saybolt viscometer
8	Determination of viscosity of liquid lubricants and fuels using Red Wood viscometer-I & II
9	Determination of viscosity of liquid lubricants and fuels using Engler viscometer
10	Determination of calorific value of gaseous fuels using Junkers gas calorimeter
11	Assembling of a calorimeter using Erlenmeyer flask to determination the energy contained in various biomass materials
12	Synthesis and characterization of biofuels
13	Application of gas chromatography in biogas analysis