



**DIPLOMA IN MECHANICAL ENGINEERING**

**CENTRALIZED QUESTION BANK**

**1020234540 - HEAT POWER ENGINEERING**

**DIRECTORATE OF TECHNICAL  
EDUCATION GOVERNMENT OF  
TAMILNADU**

**DIPLOMA END SEMESTER / YEAR EXAMINATION – 2025**

**Course:** Mechanical Engineering

**Subject :** Heat power Engineering

**QP Code :** 1020234540

**Time :** 3 Hours

**Date :**

**Session:**

**Max Marks:** 100

**Answer the following questions**

1. Determine the flash and fire point of the lubricating oil by using Open cup apparatus and Closed cup apparatus and compare the value for the given sample.
2. Draw the valve timing diagram of single cylinder four stroke petrol engines.
3. Draw the valve timing diagram of single cylinder four stroke diesel engines.
4. Draw the port timing diagram of a single cylinder two stroke Petrol Engine.
5. Load test (Performance test) on Four Stroke Diesel Engine or Four Stroke Petrol Engine.
6. Morse test on multi-cylinder petrol engine.
7. Heat balance test on Four Stroke Diesel or Petrol Engine.
8. Volumetric efficiency of Air Compressor.
9. Determination of COP of Refrigeration System.
10. Find the Percentage of CO , CO<sub>2</sub>, O<sub>2</sub> and amount of HC , NO<sub>x</sub> using Exhaust gas analyzer.

**Allocation of Marks**

<b>SI No</b>	<b>Description</b>	<b>Marks</b>
1	Aim and procedure	10
2	Tabular Column / Formulae	10
3	Observation / Calculation / Diagram	30
4	Result / Graph	10
5	Written Test (Theory Portions)	30
6	Viva Voce	10
	<b>Total</b>	<b>100</b>