



**DIPLOMA IN Mechanical Engineering
(Tool & Die)**

CENTRALIZED QUESTION BANK

4020550 - Thermal Engineering Practical

**DIRECTORATE OF TECHNICAL
EDUCATION GOVERNMENT OF
TAMILNADU**

DIPLOMA END SEMESTER / YEAR EXAMINATION – 2023

Course : Mechanical Engineering (Tool & Die)

Subject : Thermal Engineering Practical

QP Code : 4020550

Time : 3 Hours **Date** :

Session:

Max Marks: 100

PART-A

1. Determine flash and fire point of the given oil using open cup apparatus and closed cup apparatus.
2. Determine the absolute viscosity of the given lubricating oil using Redwood viscometer.
3. Determine the absolute viscosity of the given lubricating oil using Say bolt viscometer.
4. Find the timing of Ports for the given two stroke Petrol Engine.
5. Find the timing of Valves for the given four stroke Petrol Engine.
6. Find the timing of Valves for the given four stroke Diesel Engine.

PART-B

1. Conduct a performance test for the given four Stroke Petrol Engine to find BP, IP, Mechanical efficiency, Thermal efficiency and Brake thermal efficiency. Also plot a graph to your findings.
2. Conduct a performance test for the given Four Stroke Diesel Engine to find BP, IP, Mechanical efficiency, Thermal efficiency and Brake thermal efficiency. Also plot a graph to your findings.
3. Perform Morse test on Multi-cylinder Petrol Engine to find BP, IP and Mechanical efficiency.
4. Perform Heat balance test on four stroke Diesel / Petrol Engine and draw the heat balance sheet.
5. Conduct volumetric efficiency test for the air compressor and plot the results in a graph
6. Determine the COP of the given Refrigeration System.

DETAILED ALLOCATION OF MARKS

SCHEME OF EVALUATION

SL.NO	ALLOCATION	MARKS
PART-A		
1	Observation and Tabular column	05
2	Calculations	20
3	Result / Graph	10
PART-B		
4	Observation and Tabular column	10
5	Formulae and Calculations	30
6	Result / Graph	15
7	Viva-Voce	10
	Total	100