

S. B. Roll. No.....

THERMODYNAMICS-II
5th Exam/Mech./6953/Nov'24
(For 2018 Batch Onwards)

Duration: 3Hrs.

M.Marks:75

SECTION-A

Q1. Do as directed.

15x1=15

- a. The _____ engines are known as compression engines.
- b. In a 150 cc Scooter, the parameter 150 cc represents _____
- c. In a diesel engine, _____ is used for fuel injection.
- d. Compression ignition is used in _____ engines.
- e. The function of the thermostat is to _____
- f. The flash point of lubricant is _____ than its fire point.
- g. B.H.P. is determined by _____
- h. The ratio of B.H.P. to I.H.P. is known as _____
- i. A gas turbine works on _____
- j. The fuel and the oxidiser carried by the rocket are known as _____
- k. During idling _____ mixture is required.
- l. The gap between the electrodes of spark plug is nearly _____
- m. Two Stroke engines are used in buses (T/F)
- n. The engine will get overheated if fan belt is broken.(T/F)
- o. Water cooling is employed in aeroplanes. (T/F)

SECTION-B

Q2. Attempt any six questions.

6x5=30

- i. Which four strokes are required to complete the operation of four stroke engine?
- ii. Define the terms a) Bore b) Compression Ratio
- iii. Write any three advantages of CRDI system
- iv. What are desirable properties of good Lubricant?
- v. Write any three advantages of air cooling system.
- vi. A single cylinder C.I. engine working on two stroke cycle runs at 500 r.p.m. The diameter of bore and stroke length is 10 cm each. If the mean effective pressure is 6.5 bar, Calculate the I.P. of the engine.
- vii. Name the various methods of governing of steam turbines.
- viii. Write the fields of applications of gas turbine.

SECTION-C

Q3. Attempt any three questions.

3x10=30

- a. Describe the comparison between petrol engine and diesel engine and their field of applications
- b. Explain the MICO fuel injection system for multi-cylinder engine with a neat sketch.
- c. Explain i) Lubrication and types of Lubricants ii) Essential properties of good Lubricant
- d. A Four Cylinder two stroke cycle petrol engine develops 23.5 kw brake power at 2500 r.p.m. The mean effective pressure on each piston is 8.5 bars and the mechanical efficiency is 85%. Calculate the diameter and stroke of each cylinder assuming the length of stroke equal to 1.5 times the diameter of the cylinder.
- e. Explain the terms related to steam turbine. i) Bleeding ii) Compounding iii) Governing