

No. of Printed Pages : 4

Roll No.

181743/121743/31743

**4th Sem / Branch : Mech, CNC, Mech Adv. Manuf.Tech,
Mech Engg (CAD/CAM Design & Robotics)
Subject:- Thermodynamics-II / I.C. Engine**

Time : 3Hrs.

M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1 In a diesel engine, thermal efficiency lies in the range of:
a) 35-40% b) 20-30%
c) 60-75% d) 80%
- Q.2 If petrol is used in a diesel engine
a) A higher knocking will occur
b) Efficiency will low
c) Low power will be produced
d) A lot of fuel will remain unburnt
- Q.3 The electrodes of spark plug are made of
a) Aluminum alloy b) Nickel alloy
c) Chromium alloy d) None of these
- Q.4 The number of turns in the primary winding of ignition coil is
a) 100-200 b) 200-300
c) 300-400 d) 400-500
- Q.5 An injector is used in a
a) Gas turbine b) Steam turbine
c) Turbine d) Diesel turbine

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- Q.6 Approximate percentage of heat of combustion loss is
a) 25% b) 20%
c) 15% d) 10%
- Q.7 Two stroke petrol engines are lubricated by
a) Petroil lubrication
b) Forced feed lubrication
c) Splash lubrication
d) None of these
- Q.8 The compression ratio of a petrol engine lies in the range of
a) 2 to 4 b) 7 to 10
c) 14 to 20 d) None of these
- Q.9 Compounding of steam turbine
a) Reduce the rotor speed
b) Reduce the blade friction
c) Balance the rotor
d) None of these
- Q.10 Efficiency is more in case of
a) Steam engine b) Steam turbine
c) Gas turbine d) None of these

SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

- Q.11 Diesel engine is also known as _____.
- Q.12 Gudgeon pin is also known as crank pin. (True/False)
- Q.13 What is use of spark plug?
- Q.14 Define the swept volume.

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- Q.15 A racing car uses coil ignition system. (True/False)
 Q.16 What is use of fuel injector?
 Q.17 Tubular radiator is also known as honey comb radiator. (True/False)
 Q.18 The full form of CNG is _____.
 Q.19 Define convergent divergent nozzle.
 Q.20 Name the major parts of turbojet engine.

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

- Q.21 Differentiate between internal combustion and external combustion engine.
 Q.22 Explain Otto cycle.
 Q.23 What are the limitations of a simple carburetor?
 Q.24 Compare the magneto ignition and battery ignition system.
 Q.25 Write the advantages and disadvantages of air injection system.
 Q.26 Write the advantages of air cooled IC engine.
 Q.27 Explain the working of a thermostat.
 Q.28 Write the disadvantages of mist lubrication system.
 Q.29 Name the various method of reducing pollution of IC engine.
 Q.30 Write the desirable properties of CNG.
 Q.31 Explain rope brake dynamometer with the help of neat sketch.

- Q.32 Write the advantages of steam turbine over reciprocating steam engine.
 Q.33 Write the various advantages of pressure compounding.
 Q.34 Write a short note on turbojet engine.
 Q.35 Write the applications of rockets.

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

- Q.36 Explain working of four stroke diesel engine with diagram.
 Q.37 Explain MPFI system and types of fuel injection in MPFI system.
 Q.38 Compare the jet condenser and surface condenser.