

TED (10) 3005

(Revision - 2010)

Reg. No.

Signature :

Second Semester Diploma Examination in Automobile Engineering - March, 2012

AUTOMOBILE POWER PLANT

(Maximum Marks : 100)

(Time : 3 Hours)

PART - A

(Maximum Marks : 10)

- I. Answer the following questions in one or two sentences:
1. List the main holes found in cylinder block.
 2. Name any two types of fastening methods to connect Gudgeon pin and connecting rod.
 3. Define the term stoichiometric Air-fuel ratio.
 4. State the use of control-rack in fuel injection pump.
 5. List any two advantages of Air cooling for engines.

Marks

(5 x 2 = 10)

PART - B

(Maximum Marks : 30)

- II. Answer any five full questions.
1. Sketch and explain any two methods employed for the arrangement of inlet manifolds in petrol engines.
 2. State the use of vibration damper in crank shaft pulley.
 3. Sketch and explain an A.C Mechanical fuel pump and it's working.
 4. How the regulation of Injection volume can be done in Diesel Fuel injection pumps? Explain.
 5. How the lubrication of inline type fuel injection pump can be done, briefly explain.
 6. List any 3 requirements of lubricants and explain briefly.
 7. Compare with belt driven and electric motor driven cooling fans.

(5 x 6 = 30)

PART - C

(Maximum Marks : 60)

(Answer one full question from each unit)

UNIT - I

- III. a. Describe how expansion is controlled in pistons. (8)
b. Sketch and explain the construction of a 4 cylinder crankshaft. (7)

OR

- IV. a. Compare dry and wet liner with necessary sketch. (8)
b. Sketch and explain any two types of oil control rings. (7)

UNIT - II

- V. a. Explain the constructional details of following types of mufflers. (8)
i) Resonance type ii) Absorber type
b. How Acceleration pump circuit is working in a carburetor, explain with sketch. (7)

OR

- VI. a. How the principle of attitude control is applied in Zenith Carburetor? Explain with sketch. (8)
b. Explain the use of solenoid valve employed in Solex Mikuni Carburetor. (7)

UNIT - III

- VII. a. How the fuel system works in diesel engines? Explain with the help of line diagram. (8)
b. Describe the working of distributor type fuel injection pump with necessary sketch. (7)

OR

- VIII. a. How the centrifugal governor controls the engine speed in diesel engines. (8)
b. Compare direct and indirect injection type of combustion chamber in diesel engines. (7)

UNIT - IV

- IX. a. Why air cooling is not suited to Multicylinder engines and also explain air cooling is done in single cylinder engines. (8)
b. Sketch and explain the working of oil cooler. (7)

OR

- X. a. Compare road draft system and manifold suction system form of Crank case ventilation in engines. (8)
b. Sketch and explain cartridge type of oil filter and its working. (7)