

SECOND SEMESTER DIPLOMA EXAMINATION IN AUTOMOBILE
ENGINEERING—OCTOBER, 2013

AUTOMOBILE POWER PLANT

[Time : 3 hours

(Maximum marks : 100)

Marks

PART—A

I Answer *all* questions in one or two sentences. Each question carries 2 marks.

1. List functions of thermostat valve in cooling system.
2. State valve lead and valve lag.
3. What is dry sump system of lubrication ?
4. State two functions of oil control rings.
5. What is CRDI ?

(5×2=10)

PART—B

II Answer *any five* of the following questions. Each question carries 6 marks.

1. Draw the figure of an IC Engine piston and mark the parts.
2. Discuss the constructional details of any one type of connecting rod.
3. Illustrate the working of AC mechanical fuel pump.
4. Write notes on any two types of FIP governors.
5. With the help of sketch explain simple carburettor.
6. Why lubricating system is necessary in an engine ?
7. Explain electrically operated type cooling fan.

(5×6=30)

PART—C

(Answer *one* full question from each unit. Each question carries 15 marks.)

UNIT – I

- III (a) Write notes on any two types of Gudgeon pin arrangement. 8
- (b) Explain side valve mechanism with neat diagram. 7

OR

- IV Write ten classification of an IC Engine with respect to construction. 15

UNIT – II

V With the help of a neat sketch explain the working of zolex carburettor. (Any three carburettor circuits)

15

OR

VI Write notes on the following :

- (i) Petrol filter
- (ii) Two types of silencers
- (iii) Different fuel feed systems. (any three)

(3×5=15)

UNIT – III

VII With the help of sketch explain the working of distributor type fuel injection pump.

15

OR

VIII Describe the working of an injector with neat sketch.

15

UNIT – IV

IX (a) Discuss pump circulation cooling system used in automobiles.

10

(b) Summarise the necessity of pressure cap in cooling.

5

OR

X Write notes on the following :

- (i) Anti-freeze solution
- (ii) Splash lubrication
- (iii) Oil coolers.

(3×5=15)