

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/
MANAGEMENT/COMMERCIAL PRACTICE — APRIL, 2018

AUTOMOBILE POWER PLANT

[Time : 3 hours

(Maximum marks : 100)

PART — A

(Maximum marks : 10)

Marks

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

1. Define compression ratio.
2. List any four main circuits of carburetor.
3. State the purpose of gravity feed system in petrol engine.
4. List various types of air cleaners in diesel engine.
5. Define the term viscosity.

(5×2 = 10)

PART — B

(Maximum marks : 30)

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

1. Distinguish between 2 stroke and 4 stroke engines.
2. Describe valve timing diagram of 4 stroke petrol engine with a neat sketch.
3. Explain the working principle of a simple carburetor.
4. Explain briefly the different types of fuel injectors.
5. Illustrate constructional details of fuel injector.
6. Describe splash lubrication system.
7. Explain the purpose of lubrication.

(5×6 = 30)

PART — C

(Maximum marks : 60)

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

UNIT — I

- III (a) Explain the working of 4 stroke petrol engine with a neat sketch. 8
 (b) Describe overhead valve operating mechanism. 7

OR

- IV (a) Write a comparison between petrol engine and diesel engine. 8
 (b) Describe side valve operating mechanism. 7

UNIT — II

- V (a) Describe SU electrical pump. 8
 (b) Explain any two types of mufflers. 7

OR

- VI (a) Write short note on CRDI. 8
 (b) Describe different fuel feed system in petrol engine. 7

UNIT — III

- VII (a) Explain the layout of a conventional diesel fuel system. 8
 (b) Explain the working principle of centrifugal governor with a neat sketch. 7

OR

- VIII (a) Explain the working of single acting fuel feed pump. 8
 (b) Describe any two types of diesel fuel filter. 7

UNIT — IV

- IX (a) Describe petrol lubrication system. 8
 (b) Specify any four properties of lubricating oil. 7

OR

- X (a) Explain thermo siphon system. 8
 (b) Describe the working of radiator cap with the help of a simple diagram. 7