

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/
MANAGEMENT/COMMERCIAL PRACTICE — OCTOBER, 2017

AUTOMOBILE ENGINEERING

[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 Carburetion.
2. State the purpose of thermostat.
3. Name any 2 types of rear axles used in automobiles.
4. Identify the purpose shackle in leaf spring.
5. List any two advantages of CRDi.

(5×2 = 10)

PART — B

(Maximum marks : 30)

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

1. Describe the working of simple carburettor.
2. Describe any two types of governing of IC engines.
3. Explain the working of fluid coupling.
4. Distinguish between universal joint and constant velocity joint.
5. Draw the layout of steering mechanism.
6. Explain leading shoe and trailing shoe.
7. State the purpose of turbocharger.

(5×6 = 30)

[P.T.O.]

PART — C
(Maximum marks : 60)

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

UNIT — I

- III (a) Name the components of diesel fuel feed system and state the function of fuel injector. 7
(b) Explain with a schematic diagram the working of battery ignition system. 8

OR

- IV (a) Explain splash lubrication system. 7
(b) Enumerate the different circuits used in solex carburettor also state the purpose of float circuit. 8

UNIT — II

- V (a) List any seven requirements of clutch. 7
(b) Sketch any four types of stub axle and mark the parts. 8

OR

- VI (a) Illustrate the working principle of differential. 7
(b) Explain with sketch the working of a constant mesh gear box. 8

UNIT — III

- VII (a) Mention any seven objectives of suspension system. 7
(b) With a sketch, explain the working of a master cylinder in hydraulic brakes. 8

OR

- VIII (a) Discuss the benefits of disc brakes. 7
(b) Explain the working of a recirculating ball type steering gear box with sketch. 8

UNIT — IV

- IX (a) List any 7 advantages of MPFI. 7
(b) Describe briefly :
(i) Power steering (ii) Air bag. 8

OR

- X (a) Briefly explain the working of CRDi with simple sketch. 7
(b) With a circuit diagram explain electronic ignition system. 8