

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

ADVANCED 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. What is L-MPFI ?
2. What are the main areas of pollution in an IC engine ?
3. Identify any two refrigerants used in automobiles.
4. List any two advantages of cruise control systems.
5. Name the main components of EBD.

(5×2 = 10)

PART — B

(Maximum marks : 30)

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

1. Discuss the advantages of MPFI.
2. Explain port injection system.
3. Discuss the factors affecting diesel smoke.
4. How a catalytic converter works ?
5. Discuss the working of an electric seat.
6. Explain about Head up Display used in automobiles.
7. Describe the concept of drive by wire.

(5×6 = 30)

PART — C

Marks

(Maximum marks : 60)

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

UNIT — I

- III (a) Discuss the working of any two petrol injection systems. 8
 (b) What are the advantages of petrol injection system over carburettor system ? 7

OR

- IV (a) Describe the functions of various sensors used in electronic fuel injection. 8
 (b) With a neat sketch explain CRDI system. 7

UNIT — II

- V (a) What is meant by a crankcase blowby ? How it can be controlled ? 8
 (b) Explain the effects of atmospheric pollution due to automobile engines. 7

OR

- VI (a) Explain the working of EGR system. 8
 (b) Discuss about Bharat Stage emission control standards. 7

UNIT — III

- VII (a) Explain the working of electric mirror in an automobile. 8
 (b) Briefly describe about intelligent windscreen wiper. 7

OR

- VIII (a) Explain the working of automatic climate control used in automobiles. 8
 (b) Write short notes on various components used in automobile air conditioning system. 7

UNIT — IV

- IX (a) Explain the working of ABS with the help of a sketch. 8
 (b) Explain the working of an airbag system. 7

OR

- X (a) Describe Adaptive Noise Control system. 8
 (b) Explain the working of Parking Distance Control. 7