

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/  
MANAGEMENT/COMMERCIAL PRACTICE — OCTOBER, 2019**

**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 throttle body injection ?
2. State any two methods for improving fuel efficiency.
3. Define BHARATH STAGE emission norms.
4. Name any two automobile refrigerants.
5. What does GPS stands for ?

(5 × 2 = 10)

PART — B

(Maximum marks : 30)

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

1. Explain L-MPFI systems.
2. What is positive crank case ventilation system ?
3. List the different method adopted to control SI engine pollution.
4. Explain the intelligent wind screen wiper.
5. List the various components of automobile air conditioner.
6. Explain the working of an ABS system.
7. What is ESC ? Explain.

(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) State and explain the advantages of MPFI system. 6  
 (b) Explain the CRDI system with a lay out. 9

OR

- IV (a) Explain briefly about different actuators in MPFI systems. 6  
 (b) Explain the working of an electronic fuel injector. 9

## UNIT — II

- V (a) What are the sources of automobile pollution ? Explain. 6  
 (b) Explain EGR valve with a sketch. 9

OR

- VI (a) Explain how evaporative emissions can be controlled. 6  
 (b) Explain the working of a catalytic converter. 9

## UNIT — III

- VII (a) Explain the different control devices of an automobile air conditioner. 6  
 (b) Illustrate automatic climatic control. 9

OR

- VIII (a) Explain the working of electric mirror. 6  
 (b) Explain the cruise control in automobiles. 9

## UNIT — IV

- IX (a) Explain the restraint system (seat belt). 6  
 (b) Describe the working of GPS system. 9

OR

- X (a) Explain supplementary restraint system. 6  
 (b) Explain the working of a parking distance control. 9