

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/
MANAGEMENT/COMMERCIAL PRACTICE, APRIL - 2026**

AUTOMOBILE ENGINEERING

[Maximum Marks: 100]

[Time: 3 Hours]

PART-A

[Maximum Marks: 10]

- I. (Answer *all* questions in one or two sentences. Each question carries 2 marks)
1. Define carburetor.
 2. Define the governing system in an engine.
 3. State the function of a gear box used in an automobile.
 4. Define caster.
 5. State the use of anti lock braking system (ABS) in automobiles. (5 x 2 = 10)

PART-B

[Maximum Marks: 30]

- II. (Answer *any five* of the following questions. Each question carries 6 marks)
1. Explain the working of a carburetor with a figure.
 2. List any six properties of lubricants used in automobiles.
 3. Explain the transmission system in an automobile with a figure.
 4. Explain the rack and pinion steering gear.
 5. Describe the dynamics of vehicle-pitching and rolling.
 6. Describe the turbo charger.
 7. Explain the working of a air bag. (5 x 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 fuel system of a diesel engine with a figure. (8)
b. Compare the air cooling and water cooling systems in an engine. (7)

OR

- IV. a. Explain the working of the coil ignition system with a figure. (8)
b. Explain different governing systems in an engine. (7)

UNIT – II

- V. a. Explain the working of the constant mesh gear box with a figure. (8)
b. Describe a semi floating rear axle with a figure. (7)

OR

- VI. a. Explain the working of a centrifugal clutch with a figure. (8)
b. Explain the function and working principle of the differential. (7)

UNIT- III

- VII. a. State the function of the suspension system and its advantages. (8)
b. Explain the hydraulic brake system with a figure. (7)

OR

- VIII. a. Explain the re-circulating ball steering system with a figure. (8)
b. Distinguish tube-less tyres and tubed tyres. (7)

UNIT - IV

- IX. a. Explain the working of a common rail direct fuel injection system (CRDI). (8)
b. Explain pollution control techniques in automobiles. (7)

OR

- X. a. Explain the working of an electronic control module (ECM). (8)
b. Explain emissions from automobiles. (7)
