

Code No.: ME732PE

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CMR ENGINEERING COLLEGE: : HYDERABAD

UGC AUTONOMOUS

IV–B.TECH–I–Semester End Examinations (Supply) - December- 2025

AUTOMOBILE ENGINEERING

(MECH)

[Time: 3 Hours]

[Max. Marks: 70]

**Note:** This question paper contains two parts A and B.

Part A is compulsory which carries 20 marks. Answer all questions in Part A.

Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

**PART-A**

**(20 Marks)**

1. a) What are the functions of frame? [2M]
- b) What is common rail injection system? [2M]
- c) Write the sequence of the coolant circulation. [2M]
- d) What are the functions of carburetor? [2M]
- e) What are the different types of clutches? [2M]
- f) What are the main components of Transmission system? [2M]
- g) Outline the advantages of Hydraulic brake system. [2M]
- h) Write short notes on pneumatic brakes. [2M]
- i) What are the alternative fuels available? [2M]
- j) What are the various properties of gaseous fuel? [2M]

**PART-B**

**(50 Marks)**

2. a) Define Chassis. What aspects are to be considered in vehicle lay out? [5M]
- b) List out the different types of carburetors and explain simple carburetor with neat sketch. [5M]

**OR**

3. How mechanical and electrical fuel pump differ and what are the limitations of both? [10M]
4. Explain the evaporative cooling system with the help of neat sketch. [10M]

**OR**

5. What do you mean by pressure sealed cooling system? Explain. [10M]
6. What is the principle of differential? Classify them and explain any one. [10M]

**OR**

7. What are functions of suspension system of an automobile? [10M]
8. Explain the Davis Steering Mechanism & Write its relative merits. [10M]

**OR**

9. Explain Rack and pinion steering gear mechanism. [10M]
10. What are the needs of alternate fuels and describe the various types of alternate fuels for auto engines. [10M]

**OR**

11. Compare the characteristics between Natural gas and LPG. [10M]

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