

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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