

Code No.: ME732PE

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CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS

IV-B.TECH-I-Semester End Examinations (Regular) - November- 2023
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) List the components of four wheeler automobile. [2M]
- b) List the various important engine specifications. [2M]
- c) Write the function of solenoid switch in electrical system. [2M]
- d) Name the various electrical components used in an automobile. [2M]
- e) State the types of clutches. [2M]
- f) What is a Universal Joint? Where it is used? [2M]
- g) State the advantages of Davis steering mechanism. [2M]
- h) Write about the requirements of brake fluid. [2M]
- i) Discuss the Mechanism of formation of NOx emissions from an automobile engine. [2M]
- j) State the International pollution standards in brief. [2M]

PART-B

(50 Marks)

2. What are the various types of fuel injection systems? Explain any one type with neat sketch? [10M]

OR

3. Differentiate between CRDI and TDI systems used in CI engines and mention their advantages? [10M]

4. Draw the schematic diagram of battery ignition system with neat sketch? [10M]

OR

5. What are the various cooling systems used in practice and explain about water cooling system? [10M]

6. Explain about Rigid axle suspension system with neat sketch? [10M]

OR

7. Explain about working of Cone clutch and single plate clutch? [10M]

8. What is meant by Hydraulic braking system and explain its working? [10M]

OR

9. Explain about Ackerman steering gear mechanism with neat sketch; write its advantages and applications? [10M]

10. Explain the working principle of Photo-voltaic Cell with neat sketch? [10M]

OR

11. What are the various factors to be considered in the usage of hydrogen as a fuel in the automobile? [10M]
