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**PRESIDENCY
UNIVERSITY
BENGALURU**

School of Engineering

Mid - Term Examinations - November 2024

Semester: V

Date:07-11-2024

Course Code: MEC3010

Time: 11:45am – 01:15pm

Course Name: Automotive Engineering

Max Marks: 50

Program: B. Tech – Mechanical Engineering

Weightage: 25%

Instructions:

(i) Read all questions carefully and answer accordingly.

(ii) Do not write anything on the question paper other than roll number.

Part A

Answer ALL the Questions. Each question carries 2marks.

5Qx2M=10M

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|----------|-------------------------------------------------------------------|----------------|-----------|------------|
| 1 | Why we need four wheel drive in an automobile? | 2 Marks | L2 | CO1 |
| 2 | What are all the three types of Frames? | 2 Marks | L1 | CO1 |
| 3 | What are the reasons for Drag and Lift in the case of automobile? | 2 Marks | L2 | CO1 |
| 4 | What do you mean by stoichiometric air-fuel ratio? | 2 Marks | L2 | CO2 |
| 5 | What is the purpose of Ignition coil in ignition system? | 2 Marks | L2 | CO2 |

Part B

Answer ALL Questions. Each question carries 10 marks.

4QX10M=40M

6 Explain various types of automobile layout with suitable line diagrams. Also write advantages and disadvantages of each. **10 Marks L1 C01**

or

7 Discuss the components of IC Engine and elaborate the function of each component. **10 Marks L2 C01**

8 Draw and explain the three types of lubrication system commonly used in automobile. **10 Marks L2 C01**

or

9 What is the purpose of super charger in automobile? Explain the working principle of the same with suitable line diagram. **10 Marks L2 C01**

10 Explain with suitable diagram about throttle body and port injection in gasoline engines. **10 Marks L2 C02**

or

11 With suitable diagram, explain distributor type Diesel Injection system with components involved. **10 Marks L2 C02**

12 Elaborate various components of Direct Gasoline Injection System and explain how it works. **10 Marks L2 C02**

or

13 What is Electronic Ignition System? Explain the working principle of the same with suitable diagram. **10 Marks L2 C02**