



IV B.Tech I Sem Regular End Examination, Nov/Dec 2022

Automobile Engineering (PE-III)

(MECH)

Time: 3 Hours.**Max. Marks: 70**

Note: 1. Question paper consists: Part-A and Part-B.

2. In Part - A, answer all questions which carries 20 marks.

3. In Part - B, answer any one question from each unit.

Each question carries 10 marks and may have a, b as sub questions.

PART- A**(10*2 Marks = 20 Marks)**

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|-------|---|----|-----|-----|
| 1. a) | Define the term: Chassis | 2M | CO1 | BL1 |
| b) | What is the function of carburetor? | 2M | CO1 | BL1 |
| c) | Give the use of condenser in ignition system. | 2M | CO2 | BL1 |
| d) | Name the purpose of solenoid switch? | 2M | CO2 | BL1 |
| e) | What is the use of clutch? | 2M | CO3 | BL1 |
| f) | Draw the diagram of leaf spring. | 2M | CO3 | BL1 |
| g) | What is the purpose of brake? | 2M | CO4 | BL1 |
| h) | Define castor. | 2M | CO4 | BL1 |
| i) | List out any two international pollution standards. | 2M | CO5 | BL1 |
| j) | Write any two demerits of LPG fuel. | 2M | CO5 | BL1 |

PART- B**(10*5 Marks = 50 Marks)**

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|------|---|----|-----|-----|
| 2 a) | Define automobile? With the help of diagram show the components of automobile? | 5M | CO1 | BL1 |
| b) | What is the purpose of fuel pump? Explain mechanical type of fuel pump with suitable diagram? | 5M | CO1 | BL2 |

OR

- | | | | | |
|------|--|----|-----|-----|
| 3 a) | What is MPFI system? Describe MPFI with suitable sketches? | 5M | CO1 | BL2 |
| b) | What are the basic requirements of nozzle? Explain types of nozzle in brief with sketches? | 5M | CO1 | BL4 |
| 4 a) | What are the basic requirements of cooling system? What are the types of cooling system? List out? | 5M | CO2 | BL |
| b) | What is meant by spark advance and retard mechanism? Explain in detail? | 5M | CO2 | BL |

OR

- 5 a) What is the function of ignition system? With the help of suitable sketch explain electronic ignition system? 5M C02 BL1
 b) What is the necessity of solenoid switch? Explain in detail? 5M C02 BL4
- 6 a) What is the purpose of gear box in transmission system? What are the various types of gear boxes? 5M C03 BL1
 b) What is meant by independent suspension system? Explain in detail? 5M C03 BL4
- OR**
- 7 a) With the help of sketch explain multi plate clutch in detail? 5M C03 BL4
 b) With the help of suitable sketch explain torsion bar? 5M C03 BL4
- 8 a) With help of neat and suitable sketch explain any one type of hydraulic breaking system? 5M C04 BL4
 b) What is master cylinder? Explain it with suitable sketch? 5M C04 BL4
- OR**
- 9 a) With help of neat and suitable sketch explain any one type of mechanical breaking system? 5M C04 BL4
 b) Explain Ackerman steering mechanism with suitable sketch? 5M C04 BL4
- 10 a) What are the various types of emissions we can observe from automobiles? What are their hazardous effects? 5M C05 BL1
 b) What is the concept of biomass? Explain in detail? 5M C05 BL4
- OR**
- 11 a) List out various solar collectors are used to tap solar radiation? Explain any one in detail? 5M C05 BL4
 b) Explain production method of any one alcohol in detail? 5M C05 BL4

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CO-Course Outcome

BL - Blooms Taxonomy Levels