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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)

B.Tech IV Year I Semester Regular Examinations February-2022

AUTOMOBILE ENGINEERING

(Mechanical Engineering)

Time: 3 hours

Max. Marks: 60

PART-A

(Answer all the Questions 5 x 2 = 10 Marks)

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|---|---|----|----|
| 1 | a Distinguish between real wheel drive and front wheel drive. | L2 | 2M |
| | b Name any Five components used in fuel supply system. | L1 | 2M |
| | c List the functions of ignition system. | L1 | 2M |
| | d List the functions of clutches. | L1 | 2M |
| | e State the functions of steering gears. | L1 | 2M |

PART-B

(Answer all Five Units 5 x 10 = 50 Marks)

UNIT-I

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|---|---|----|----|
| 2 | a Classify the automobile engines. | L4 | 5M |
| | b Explain the direct injection type combustion chamber in C.I Engine. | L2 | 5M |

OR

- | | | | |
|---|--|-------|-----|
| 3 | Explain the following indirect injection type combustion chamber in C.I Engine with neat sketch. (i) Swirl Chamber (ii) Pre Combustion Chamber (iii) Air Cell or Energy Cell | L2,L3 | 10M |
|---|--|-------|-----|

UNIT-II

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|---|---|----|-----|
| 4 | Name various types of emissions produced from diesel and petrol engines and state the reasons for their production. | L1 | 10M |
|---|---|----|-----|

OR

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|---|--|----|----|
| 5 | a Explain the working of supercharger with a neat sketch. | L2 | 5M |
| | b List out the advantages and disadvantages of supercharger. | L1 | 5M |

UNIT-III

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|---|--|-------|-----|
| 6 | Explain briefly about battery coil ignition system with a suitable sketch. | L2,L3 | 10M |
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OR

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|---|--|----|----|
| 7 | a Describe the functions of engine lubrications. | L1 | 5M |
| | b Explain the properties of engine lubrications. | L2 | 5M |

UNIT-IV

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|---|--|----|----|
| 8 | a State the different functions of clutch. | L1 | 5M |
| | b Describe in detail about the torque converter. | L1 | 5M |

OR

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|---|--|-------|-----|
| 9 | Name the different types gearboxes used in an automobile and explain any one of it with neat sketch. | L1,L2 | 10M |
|---|--|-------|-----|

UNIT-V

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|----|---|-------|----|
| 10 | a Explain about Torque Bar. | L2 | 5M |
| | b Explain in detail about vacuum braking system with neat sketch. | L2,L3 | 5M |

OR

- | | | | |
|----|--|-------|-----|
| 11 | Explain briefly about the Davis steering mechanism with neat sketch. | L2,L3 | 10M |
|----|--|-------|-----|

END