

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
B.Tech. III Year II Semester Regular & Supplementary Examinations June-2025
AUTOMOBILE ENGINEERING
(Mechanical Engineering)

Time: 3 Hours**Max. Marks: 60**

(Answer all Five Units 5 x 12 = 60 Marks)

UNIT-I

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|---|---|-----|----|----|
| 1 | a How do you Classify the automobile engines. | CO1 | L2 | 6M |
| | b List out the components of I.C engine and its function. | CO1 | L1 | 6M |

OR

- | | | | | |
|---|---|-----|----|----|
| 2 | a Differentiate between S I engines and CI engines. | CO1 | L2 | 6M |
| | b Elucidate the direct injection type combustion chamber in C.I Engine. | CO1 | L2 | 6M |

UNIT-II

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|---|---|-----|----|----|
| 3 | a Discuss in detail about the CRDI engines. | CO2 | L2 | 6M |
| | b Elucidate the working of turbocharger with a neat sketch. | CO2 | L2 | 6M |

OR

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|---|---|-----|----|----|
| 4 | a Explain about radiator and its components with a diagram. | CO2 | L2 | 6M |
| | b What do you know about the emission norms? Discuss | CO2 | L2 | 6M |

UNIT-III

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|---|--|-----|----|----|
| 5 | a Describe the grading phenomena of Lubricant. | CO3 | L2 | 6M |
| | b What are the functions of Engine Lubrication system? | CO3 | L1 | 6M |

OR

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|---|---|-----|----|-----|
| 6 | Name various types of components used in Lighting System used in automobile with neat sketch. | CO3 | L1 | 12M |
|---|---|-----|----|-----|

UNIT-IV

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|---|--|-----|----|-----|
| 7 | Classify different types of clutches used in an automobile? Explain any one of them with neat diagram. | CO4 | L1 | 12M |
|---|--|-----|----|-----|

OR

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|---|--|-----|----|----|
| 8 | a Discuss in detail about the fluid coupling. | CO4 | L2 | 6M |
| | b What are the different materials used for manufacturing of Clutch. | CO4 | L1 | 6M |

UNIT-V

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|---|--|-----|----|-----|
| 9 | Discuss in detail with a neat sketch the working of an Ackermann steering mechanism. | CO6 | L2 | 12M |
|---|--|-----|----|-----|

OR

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|----|---|-----|----|----|
| 10 | a With a neat diagram explain the construction and operation of a shock Absorber. | CO5 | L2 | 6M |
| | b Write the method of wheel balancing. | CO5 | L2 | 6M |

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