

Reg. No:

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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY: PUTTUR
(AUTONOMOUS)

B.Tech II Year II Semester Supplementary Examinations July-2021

MECHANICAL ENGINEERING

(Common to CE & AGE)

Time: 3 hours

Max. Marks: 60

PART-A

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

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|---|----------|---|----|
| 1 | a | Define compression ratio. | 2M |
| | b | What are the advantages of CRDI Engine? | 2M |
| | c | What are the Psychometric Properties? | 2M |
| | d | What is the purpose of Clutch? | 2M |
| | e | What is the purpose of Milling Machine? | 2M |

PART-B

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

UNIT-I

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|---|----------|--|----|
| 2 | a | Explain in detail about different process in Carnot Cycle. | 5M |
| | b | Express the Vander walls Equation. | 5M |

OR

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|---|----------|---------------------------------|----|
| 3 | a | Define Entropy. | 5M |
| | b | Express the Ideal Gas Equation. | 5M |

UNIT-II

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|---|----------|--|----|
| 4 | a | Explain about different types of Steam Turbines. | 5M |
| | b | What are the advantages of steam turbine over steam engines? | 5M |

OR

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|---|----------|--|----|
| 5 | a | What are the merits and demerits of Gas turbine with I.C engines | 5M |
| | b | What is a Hybrid Engines? Explain its Types. | 5M |

UNIT-III

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|---|----------|-------------------------------------|----|
| 6 | a | Define Heat Pump. | 5M |
| | b | What is Coefficient of Performance? | 5M |

OR

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|---|----------|--|----|
| 7 | a | Explain the working of split air conditioner. | 6M |
| | b | Write the advantages and Disadvantages of Split air conditioner. | 4M |

UNIT-IV

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|---|----------|------------------------------------|----|
| 8 | a | Define Engineering Materials | 5M |
| | b | Define power Transmission Devices. | 5M |

OR

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| 9 | | 10M |
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UNIT-V

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|----|----------|---------------------------------------|----|
| 10 | a | Briefly discuss about soldering. | 5M |
| | b | Explain about Forging and their types | 5M |

OR

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| 11 | | 10M |
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END