

Reg. No:

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

B.Tech IV Year II Semester Advanced Supplementary Examinations September-2021

POWER PLANT ENGINEERING

(Mechanical Engineering)

Time: 3 hours

Max. Marks: 60

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

UNIT-I

- | | | | |
|---|--|----|----|
| 1 | a Discuss about the resources for power development in India? | L2 | 6M |
| | b What is meant by load curve? Explain its importance in power generation. | L1 | 6M |

OR

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|---|--|----|----|
| 2 | a With a neat sketch explain the layout of MHD power plant. | L2 | 6M |
| | b Identify the pollution effects from hydro-electric plants. | L3 | 6M |

UNIT-II

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|---|---|----|----|
| 3 | a Explain Super Critical boilers and their advantages | L2 | 6M |
| | b What are the properties of coal? | L1 | 6M |

OR

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|---|--|----|----|
| 4 | a Explain the working of a spreader stoker. | L2 | 4M |
| | b Illustrate the working of an electrostatic precipitator. | L2 | 8M |

UNIT-III

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|---|--|----|----|
| 5 | a What is meant by super charging and mention the advantages? | L1 | 6M |
| | b Compare a closed cycle gas turbines with open cycle gas turbine. | L4 | 6M |

OR

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|---|---|----|-----|
| 6 | List out the advantages and disadvantages of combined cycle power plant | L1 | 12M |
|---|---|----|-----|

UNIT-IV

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|---|--|----|----|
| 7 | a Illustrate high head power plant with a neat sketch. | L2 | 6M |
| | b List out the hydroelectric power plant auxiliaries. | L1 | 6M |

OR

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|---|---|----|----|
| 8 | a Compare base load plant with peak load plant. | L4 | 6M |
| | b How to select prime movers for hydroelectric power plant. | L1 | 6M |

UNIT-V

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|---|---|----|----|
| 9 | a Enumerate the requirements of fission process. | L1 | 6M |
| | b Describe boiling water reactor with neat diagram. | L2 | 6M |

OR

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|----|--|----|----|
| 10 | a Define shielding and its purpose. | L1 | 6M |
| | b Draw a fast breeder reactor and explain. | L2 | 6M |

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