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

B.Tech IV Year II Semester Supplementary Examinations May-2022

ADVANCED WELDING PROCESSES

(Mechanical Engineering)

Time: 3 hours

Max. Marks: 60

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

UNIT-I

- | | | | |
|---|--|----|----|
| 1 | a How do you classify welding process? | L2 | 6M |
| | b What is the common fuel gases used in the gas welding? Describe briefly. | L1 | 6M |

OR

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|---|---|----|----|
| 2 | a Explain the production of acetylene gas. | L2 | 6M |
| | b Draw the Oxy-Acetylene welding setup. Discuss the importance of it. | L2 | 6M |

UNIT-II

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|---|--|----|----|
| 3 | a Draw the TIG welding setup and discuss the process. | L2 | 6M |
| | b Explain the addition of filler metal in TIG welding. | L2 | 6M |

OR

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|---|---|----|----|
| 4 | a Explain the submerged arc welding process with neat sketch. | L2 | 6M |
| | b Discuss the process variables in SAW. | L2 | 6M |

UNIT-III

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|---|---|----|----|
| 5 | a Give the desired characteristics of a welding power source. | L1 | 6M |
| | b Explain the general characteristics of a transformer. | L2 | 6M |

OR

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|---|--|----|----|
| 6 | a What are the different methods of controlling current in a welding transformer? | L2 | 6M |
| | b Define duty cycle of a welding power source and explain its role in the selection of a power source. | L1 | 6M |

UNIT-IV

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|---|---|----|----|
| 7 | a Describe the process of explosion welding and explain its principle of operation. | L1 | 6M |
| | b What are the elements used in explosive welding? Write short note of it. | L1 | 6M |

OR

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|---|--|----|----|
| 8 | a Describe the diffusion welding process. | L1 | 6M |
| | b What are the methods of diffusion welding and explain? | L1 | 6M |

UNIT-V

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|---|--|----|----|
| 9 | a Describe the brazing process. | L1 | 6M |
| | b What are the different brazing processes used in industries? Explain anyone. | L3 | 6M |

OR

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|----|--|----|----|
| 10 | a What are the applications of soldering process? | L1 | 6M |
| | b What are the different types of vacuum systems for EBW? Explain the systems. | L2 | 6M |

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