

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

B.Tech IV Year I Semester Supplementary Examinations June-2024
ADVANCED WELDING PROCESSES

(Mechanical Engineering)

Time: 3 Hours

Max. Marks: 60

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

UNIT-I

- | | | | | | |
|---|---|---|-----|----|----|
| 1 | a | Explain the production of acetylene gas. | CO1 | L2 | 6M |
| | b | Draw the Oxy-Acetylene welding setup and equipment. Discuss the importance of it. | CO1 | L2 | 6M |

OR

- | | | | | | |
|---|--|---|-----|----|-----|
| 2 | | Explain oxy-fuel gas cutting with neat sketch of gas cutting torch and give the applications. | CO1 | L2 | 12M |
|---|--|---|-----|----|-----|

UNIT-II

- | | | | | | |
|---|---|--|-----|----|----|
| 3 | a | What are the applications of PAW. | CO2 | L1 | 6M |
| | b | Draw the TIG welding setup and discuss the process | CO2 | L2 | 6M |

OR

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|---|---|---|-----|----|----|
| 4 | a | With neat sketch explain plasma arc welding process. | CO2 | L2 | 6M |
| | b | Discuss MIG welding setup and process with neat sketch. | CO2 | L2 | 6M |

UNIT-III

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|---|---|---|-----|----|----|
| 5 | a | Explain the general characteristics of a transformer. | CO3 | L2 | 6M |
| | b | Give the desired characteristics of a welding power source. | CO3 | L1 | 6M |

OR

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|---|--|---|-----|----|-----|
| 6 | | Classify the solid state welding process and explain friction welding with neat sketch. | CO3 | L2 | 12M |
|---|--|---|-----|----|-----|

UNIT-IV

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|---|--|---|-----|----|-----|
| 7 | | Define adhesive bonding and nature of adhesive joints. With neat sketch write short notes of joint designs in adhesive bonding. | CO5 | L2 | 12M |
|---|--|---|-----|----|-----|

OR

- | | | | | | |
|---|---|---|-----|----|----|
| 8 | a | With neat sketch explain joint designs in friction welding. | CO5 | L2 | 6M |
| | b | What are the advantages and limitations of friction stir welding? | CO5 | L1 | 6M |

UNIT-V

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|---|--|--|-----|----|-----|
| 9 | | Describe the brazing process and explain the steps used in brazed joint. | CO6 | L1 | 12M |
|---|--|--|-----|----|-----|

OR

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|----|---|--|-----|----|----|
| 10 | a | Write short notes on seam welding and projection welding process with neat sketch. | CO6 | L2 | 6M |
| | b | With neat sketch describe the flash butt welding process. | CO6 | L3 | 6M |

*** END ***

