

**Reg. No:**

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

**B.Tech IV Year I Semester Regular Examinations February-2022**

**ADVANCED WELDING PROCESS**

(Mechanical Engineering)

Time: 3 hours

Max. Marks: 60

**PART-A**

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

- |   |   |   |    |    |
|---|---|---|----|----|
| 1 | a | Explain Gas Welding process.                  | L1 | 2M |
|   | b | What is meant by Arc Welding Process          | L1 | 2M |
|   | c | What is the application of Ultrasonic welding | L1 | 2M |
|   | d | Define the Seam welding                       | L2 | 2M |
|   | e | Define the Brazing                            | L2 | 2M |

**PART-B**

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

**UNIT-I**

- |   |   |                                       |    |    |
|---|---|---------------------------------------|----|----|
| 2 | a | What are the gas welding techniques?  | L1 | 5M |
|   | b | Give the applications of gas welding. | L1 | 5M |

**OR**

- |   |   |  |    |    |
|---|---|--|----|----|
| 3 | a | What are the different types of electrode motions and positions in SMAW welding? | L2 | 5M |
|   | b | Give the applications of SMAW.   | L3 | 5M |

**UNIT-II**

- |   |   |  |    |    |
|---|---|--|----|----|
| 4 | a | Name the types of weld backing methods for SAW and explain anyone. | L1 | 5M |
|   | b | What are the types of fluxes and their compounding?                | L3 | 5M |

**OR**

- |   |  |   |    |     |
|---|--|---|----|-----|
| 5 |  | Draw the TIG welding setup and discuss the process. | L2 | 10M |
|---|--|---|----|-----|

**UNIT-III**

- |   |   |  |    |    |
|---|---|--|----|----|
| 6 | a | With neat sketch, explain joint designs in friction welding. | L2 | 5M |
|   | b | Explain the general characteristics of a transformer.        | L3 | 5M |

**OR**

- |   |  |  |    |     |
|---|--|--|----|-----|
| 7 |  | With suitable diagram, explain the ultrasonic welding process. | L2 | 10M |
|---|--|--|----|-----|

**UNIT-IV**

- |   |   |  |    |    |
|---|---|--|----|----|
| 8 | a | Give the advantages and disadvantages of adhesive bonding. | L2 | 6M |
|   | b | What are the applications of adhesive bonding?             | L1 | 4M |

**OR**

- |   |   |   |    |    |
|---|---|---|----|----|
| 9 | a | With a neat sketch describe the flash butt welding process. | L3 | 5M |
|   | b | What do you understand about Upset butt-welding?            | L2 | 5M |

**UNIT-V**

- |    |   |  |    |    |
|----|---|--|----|----|
| 10 | a | Describe the brazing process and explain the steps used in brazed joint. | L1 | 5M |
|    | b | Explain the use of brazing and disadvantages.                            | L2 | 5M |

**OR**

- |    |   |  |    |    |
|----|---|--|----|----|
| 11 | a | What are the applications of Electron beam electron welding process? | L3 | 5M |
|    | b | Give the advantages and disadvantages of EBW.                        | L2 | 5M |

\*\*\*END\*\*\*