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

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

ADVANCED WELDING PROCESSES

(Mechanical Engineering)

Time: 3 hours

Max. Marks: 60

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

UNIT-I

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|-----------|---|----|-----|
| 1 | With neat sketch explain SMAW (Shielded metal arc welding) and operation. | L2 | 12M |
| OR | | | |
| 2 | a Classify the arc welding consumables. | L1 | 6M |
| | b What are the main purposes of electrode coatings? | L1 | 6M |

UNIT-II

- | | | | |
|-----------|---|----|----|
| 3 | a Discuss MIG welding setup and process with neat sketch. | L2 | 6M |
| | b Give the area of application and advantages of MIG welding. | L3 | 6M |
| OR | | | |
| 4 | a Draw the TIG welding setup and discuss the process. | L2 | 6M |
| | b What are the types of fluxes and their compounding? | L3 | 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 | | | |
| 6 | a Give the applications of friction welding process. | L3 | 6M |
| | b Write short note on process variables of ultrasonic welding. | L2 | 6M |

UNIT-IV

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|-----------|---|----|-----|
| 7 | Explain the process variables and its effects in explosive welding. | L2 | 12M |
| OR | | | |
| 8 | a With neat sketch describe the flash butt welding process. | L3 | 6M |
| | b What do you understand about Upset butt welding? | L2 | 6M |

UNIT-V

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|-----------|---|----|-----|
| 9 | a Describe the LASER beam welding process with neat sketch. | L2 | 6M |
| | b Discuss the process variables in LASER beam welding. | L2 | 6M |
| OR | | | |
| 10 | Enumerate different soldering methods and describe in detail any two of them. | L2 | 12M |

*** END ***