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**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR**  
(AUTONOMOUS)**B.Tech IV Year II Semester Regular Examinations September 2020****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 can you classify welding process? **6M**  
b Draw the Oxy-Acetylene welding setup and equipment. Discuss the importance of it. **6M**
- OR**
- 2 Explain oxy-fuel gas cutting with neat sketch of gas cutting torch and give the applications. **12M**

**UNIT-II**

- 3 a What are the types of fluxes and their compounding? **6M**  
b Draw the TIG welding setup and discuss the process. **6M**
- OR**
- 4 a Discuss MIG welding setup and process with neat sketch. **6M**  
b Give the area of application and advantages of MIG welding. **6M**

**UNIT-III**

- 5 a Explain the general characteristics of a transformer. **6M**  
b What are the different methods of controlling current in a welding transformer? **6M**
- 6 a With suitable diagram explain the ultrasonic welding process. **8M**  
b Give the applications of friction welding process. **4M**

**UNIT-IV**

- 7 a Explain the process variables and its effects in explosive welding. **6M**  
b Give the advantages and disadvantages of explosive welding. **6M**
- OR**
- 8 a Define adhesive bonding and nature of adhesive joints. With neat sketch **4M**  
b Describe the basic principle of resistance welding. **8M**

**UNIT-V**

- 9 a Describe the brazing process and explain the steps used in brazed joint. **8M**  
b What are the applications of soldering process? **4M**
- OR**
- 10 a What are the different types of vacuum systems for EBW? Explain the systems. **6M**  
b Describe the LASER beam welding process with neat sketch. **6M**

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