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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)**B.Tech IV Year II Semester Advanced Supplementary Examinations Oct-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 What are the gas welding techniques? **6M**
 b What are the different types of electrode motions and positions in SMAW welding? **6M**
- OR**
- 2 How can you classify heavily coated low carbon arc welding electrodes? Explain. its importance. **12M**

UNIT-II

- 3 a Name the types of weld backing methods for SAW and explain any one. **6M**
 b What are the types of fluxes and their compounding? **6M**
- OR**
- 4 a What are the metals that can be welded by TIG and give the area of application? **6M**
 b Give the advantages and disadvantages of GTAW. **6M**

UNIT-III

- 5 Explain the role of static volt- ampere characteristics of a welding power source. Sketch and describe different types of static V-I characteristics and the need for them. **12M**
- 6 a Discuss the output V-I characteristics of welding generator and use of pulsed currents. **6M**
 b Classify the sold state welding process . **6M**

UNIT-IV

- 7 a What are the methods of diffusion welding and explain? **6M**
 b Give the advantages and disadvantages of diffusion welding. **6M**
- OR**
- 8 a With neat sketch describe the flash butt welding process. **6M**
 b What do you understand about Upset butt welding? **6M**

UNIT-V

- 9 a What are the different brazing processes used in industries? **6M**
 b Describe the role of a flux in soldering. Name and describe in brief the important soldering fluxes. **6M**
- OR**
- 10 a What are the different types of vacuum systems for EBW? Explain the systems. **6M**
 b Discuss the process variables in LASER beam welding. **6M**

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