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Reg. No: .....

Name: .....

**Fifth Semester B. Tech Degree Examination, Model Question Paper  
(2013 Scheme)**

**13. 506.2 ADVANCED WELDING TECHNOLOGY (MPU)**

Time: 3 Hours

Max. Marks: 100

**PART-A**

Answer **all** questions. Each question carries **2** marks

- 1) Why vacuum is important in producing a good quality weld in EBW?
- 2) Explain the principle behind LBW. Write some applications.
- 3) What are the advantages of constricting plasma in PAW?
- 4) What are the typical welding parameters for MIG welding?
- 5) Give two examples of adhesives and mention its general characteristics
- 6) How cladding is performed by EXW?
- 7) Explain the phenomenon surface jetting observed during EXW.
- 8) How radial friction welding is used to join collars to shafts and tubes?
- 9) What is deformation resistance welding?
- 10) Compare vacuum brazing with welding. **(10x2=20 Marks)**

**PART-B**

Answer **any one full** question from each Module. **Each** question carries **20** marks

**Module – I**

- 11) a) Write short note on i) Electron beam gun ii) Safety in welding iii) Types of joint and welding. **10**
- b) With neat labeled sketch explain Plasma Arc Welding. Write its advantages and disadvantages. **10**

**OR**

- 12) a) Explain Electron Beam Welding with neat labeled sketch. Mention some applications. **10**
- b) Explain how different process parameter influence Laser Beam Welding. **10**

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**Module – II**

- 13) a) Explain the process of Needle Arc Micro Plasma Welding. **10**  
b) Write a short note on different theories associated with Adhesive Bonding. **10**

**OR**

- 14) a) With suitable sketch explain the process of TIG welding. What are its disadvantages? **10**  
b) What are the different joint designs in adhesive bonding? Explain how a good joint design can be selected? **10**

**Module – III**

- 15) a) Explain how tube welding is done with the help of explosive welding technique. **10**  
b) With suitable sketches explain different variants of friction welding. **10**

**OR**

- 16) a) Describe the different equipments needed for Explosive Welding. **10**  
b) Explain how the weld quality of different welded joints can be determined? **10**

**Module – IV**

- 17) a) Explain how different variables affect the quality of diffusion welding? **10**  
b) What are the different methods of diffusion welding? How surface preparations affect the strength of the joint? **10**

**OR**

- 18) a) With neat labeled sketch explain the working of Ultra sonic Welding. **10**  
b) Explain the mechanism of Diffusion bonding. **10**

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