

**B.Tech. - VIEP - MECHANICAL ENGINEERING  
(BTMEVI)**

**Term-End Examination**

**June, 2019**

00551

**BIMEE-024 : WELDING ENGINEERING**

*Time : 3 hours*

*Maximum Marks : 70*

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*Note : (i) Attempt any five questions.*

*(ii) All questions carry equal marks.*

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1. (a) Explain submerged arc welding process with a neat sketch and state its applications in industry. 7
- (b) Differentiate between TIG and MIG welding processes. 7
2. (a) Explain the process of laser beam welding. 7
- (b) What do you mean by underwater welding? Describe the underwater welding process with a neat sketch. 7
3. (a) Classify various surfacing methods and explain the working of plasma spraying with a neat sketch. 7
- (b) Compare the processes of Brazing, Soldering and Welding. 7

4. (a) Describe distortion and explain the effect of preheating and post weld heating on distortion. 7
- (b) Define weldability of materials. Mention the factors on which weldability depends. 7
5. (a) Describe plasma spraying with a neat sketch and also give its applications. 7
- (b) Explain ultrasonic and magnetic particle inspection as applied to welds. 7
6. (a) How do you control the quality of weld ? Discuss . 7
- (b) Discuss different welding joints with sketches. 7
7. Write short notes on **any four** of the following :
- (a) Welding of plastics **4x3.5=14**
- (b) Weld symbols
- (c) Welding defects
- (d) Gas welding flames
- (e) Weld size calculations
- (f) Weld Thermal Cycles and their effects
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