

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

**Term-End Examination**

**December, 2014**

00575

**BIMEE-024 : WELDING ENGINEERING**

*Time : 3 hours*

*Maximum Marks : 70*

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**Note:** Answer any **five** questions. All questions carry equal marks. Standard symbols and notations have usual meaning.

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1. (a) Explain briefly the Submerged Arc Welding (SAW) process with a neat sketch. Also mention its advantage and application. 7
- (b) Differentiate between TIG and MIG Welding processes. 7
2. (a) Describe the principle and mechanism of Laser Welding process. 7
- (b) Explain Ultrasonic Welding with a neat sketch and give its specific application. 7
3. (a) Explain the process of Oxy-Acetylene Flame Cutting with a neat sketch. 7
- (b) Define Brazing and compare it with Soldering. 7

4. (a) What are the aims of pre-heating in welding? Enlist the different methods for it. 7
- (b) Explain the Metallurgical after-effects of welding. 7
5. (a) Describe Ultrasonics-based Non-destructive method of testing. Give its field of application. 7
- (b) Name and illustrate the different types of welding positions. 7
6. (a) Describe the working principle and applications of Explosive Welding. 7
- (b) Illustrate the different variants of butt joint based on edge preparation. 7
7. (a) Explain with a neat sketch, the salient features of Resistance Spot Welding. Give its specific application. 7
- (b) Classify the tests for Mechanical Properties of welded joints. Explain any one in detail. 7
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