

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

Term-End Examination

June, 2013

BIMEE-024 : WELDING ENGG.

Time : 3 hours

Maximum Marks : 70

Note : Attempt any five questions. All questions carry equal marks.

1. (a) Explain oxy-acetylene welding process with a neat sketch. 7+7
(b) Explain the advantages, limitations and applications of tungsten inert gas welding.
2. (a) Explain the process of Laser Beam Welding. 7+7
(b) Discuss any two types of under water welding processes.
3. (a) Distinguish between soldering and brazing. 7+7
(b) Explain the principle and operation of flame spraying.
4. (a) What are the problems involved in welding of aluminium ? Explain the measures to be taken to avoid these problems. 7+7
(b) Explain the significance of Schaffler diagram and Delong diagrams.

5. (a) Explain the dye penetrant test procedure. 7+7
What are its merits and limitation ?
- (b) Describe with a neat diagram the process of Electroslag welding. Enlists its application.
6. (a) Explain the principle of operation of friction 7+7
welding process.
- (b) Explain the principle of ultrasonic welding process.
7. (a) List the steps in Brazing. Write a note on 7+7
brazing joint design.
- (b) What tests do you suggest to evaluate the mechanical properties of welded joints ? Explain any one in detail.
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