

**B.Tech. MECHANICAL ENGINEERING
(BTMEVI)****Term-End Examination****June, 2014****BIMEE-024 : WELDING ENGG.***Time : 3 hours**Maximum Marks : 70*

- Note :*
- (i) *All questions carry equal marks.*
 - (ii) *Attempt any five questions.*
 - (iii) *Standard symbols and notations have usual meaning.*

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1. (a) Explain different types of gas welding flames with neat sketch. Give their characteristics and specific application. 7
 - (b) Explain basic principle of Resistance welding process. Classify them and give specific applications of each type. 7
 2. (a) Explain the process of Electron Beam Welding with a neat sketch. 7
 - (b) What do you mean by under water welding ? Describe wet under water welding process. 7
 3. (a) What is Flame Spraying ? Classify it and explain any one process. 7
 - (b) Define soldering. Discuss the following factors which affect the soldering mechanism : 7
 - (i) Wetting
 - (ii) Alloying
 - (iii) Capillary Action

4. (a) Define Weldability. What are the effects of alloying elements on weldability? 7
(b) Describe the aims of post weld heat treatment of welded components. 7
5. (a) Enlist all important Non-destructive methods of weld inspection. Describe any one of them in detail. 7
(b) Name and sketch different types of weld joints. 7
6. (a) Describe the salient features of cold pressure welding and give its specific field of application. 7
(b) List different factors that affect Fatigue life of welded component. 7
7. (a) Explain the advantages, limitations and applications of Friction welding process. 7
(b) Enlist different methods of surfacing. Explain any one process in detail. 7
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