

Printed Pages—2

EME022

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 2533

Roll No.

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B. Tech.

(SEM. VI) THEORY EXAMINATION 2011-12

ADVANCED WELDING TECHNOLOGY*Time : 2 Hours**Total Marks : 50*

- Note :—** (1) Attempt **all four** questions.
(2) All questions carry marks as indicated.

1. Write notes on any **four** parts of the following :—
(4×3½=14)
 - (a) Welding of Cast Iron.
 - (b) Metal Inert Gas (MIG) Welding.
 - (c) Gas Welding and its classifications.
 - (d) Resistance Welding Process and its applications.
 - (e) Stainless steel welding and Maurer Diagram.
 - (f) Brazing and Soldering Process.
2. Attempt any **two** parts of the following :— (2×6=12)
 - (a) Explain the method of Plasma Arc Welding. Discuss its advantages and limitations.
 - (b) What is Electron Beam Welding ? Explain giving suitable sketch. Also mention its advantages over other Welding Processes.
 - (c) Explain the working of Ultrasonic Welding. Give its applications and advantages.

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3. Attempt any *two* parts of the following :— (2×6=12)
- (a) Explain the working principle of Explosive Welding. Give its advantages and limitations. What do you mean by Cladding ?
 - (b) Explain with sketch the process of underwater welding. Give its types and applications.
 - (c) What do you mean by Metallizing and Hard facing ? Explain the process giving its advantages and applications.
4. Attempt any *two* parts of the following :— (2×6=12)
- (a) What are the important design considerations in Brazing of Parts ?
 - (b) Explain with sketch “Weld affected zone”. What is its significance ? How it affects the selection of welding process ?
 - (c) How do you proceed for Inspection and Testing of Welding Joints ? Discuss in detail.