

17621

21415

3 Hours / 100 Marks

Seat No.

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Instructions : (1) All Questions are *compulsory*.

(2) Answer each next main Question on a new page.

(3) Illustrate your answers with neat sketches wherever necessary.

(4) Figures to the right indicate full marks.

Marks

1. Attempt any FIVE :

20

- (a) Explain in brief TIG welding.
- (b) Explain electro slag welding. State its working principle.
- (c) State advantages & disadvantages of MIG welding.
- (d) Explain the working of friction welding.
- (e) Explain Micro welding.
- (f) Define Resistance welding. State its applications.
- (g) Explain process Equipment welding codes.

2. Attempt any FOUR :

16

- (a) State advantages & limitations of submerged arc welding.
- (b) Explain pedestal boom manipulators.
- (c) Differentiate between flux cored arc welding & submerged arc welding.
- (d) State the advantages & disadvantages of thermit welding.
- (e) State advantages & disadvantages of Resistance welding.

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- 3. Attempt any TWO :** **16**
- (a) What is distortion ? What are its types ? What are its causes ?
 - (b) Explain with neat sketch plasma arc welding. State its advantages.
 - (c) Explain in brief various advanced welding equipment required for latest welding.
- 4. Attempt any FOUR :** **16**
- (a) What are welding fixtures used in TIG welding ?
 - (b) What are safety practices carried out while doing submerged arc welding ?
 - (c) State advantages & disadvantages of electro slag welding.
 - (d) What are factors influencing the choice of technique used in fabricated structures ?
 - (e) What is flux cored arc welding ? State its one application.
 - (f) Describe Automatic welding.
- 5. Attempt any FOUR :** **16**
- (a) Explain welding of alloy steel.
 - (b) Explain the process of laser cutting & welding.
 - (c) Explain various shielding gases.
 - (d) Explain preparation of welding procedure specification.
 - (e) Explain with application precision welding.
 - (f) Draw a neat sketch of Atomic hydrogen welding.
- 6. Attempt any FOUR :** **16**
- (a) What is MIG welding ? Explain its principle of operation.
 - (b) Explain with sketch Ultrasonic welding.
 - (c) Explain welding procedure for composite materials.
 - (d) Explain various piping welding codes.
 - (e) Compare SAW with MIG.
 - (f) Explain the use of weld backing.
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