



# 17621

11819

**3 Hours / 100 Marks**

Seat No.

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- Instructions :*
- (1) *All questions are **compulsory**.*
  - (2) *Illustrate your answers with **neat sketches wherever necessary**.*
  - (3) *Figures to the **right** indicate **full marks**.*

**Marks**

1. Attempt **any five** :

**(5×4=20)**

- a) Draw a neat sketch of automatic welding.
- b) List the equipments which are used in MIG welding.
- c) State any two advantages and two limitations of SAW.
- d) Compare FCAW with TIG welding on any 4 parameters.
- e) Describe the process of electroslag welding.
- f) Draw a neat sketch of laser beam welding.
- g) Define Resistance welding and list the factors affecting it.
- h) Explain the structural welding code – AWS D 1.1.

2. Attempt **any four** :

**(4×4=16)**

- a) List any four causes of distortion in weld structure.
- b) State the different advanced welding equipments used for latest methods of welding.
- c) What are the different contents of WPS ?
- d) Describe the use of pedestal boom manipulator.
- e) State the two advantages and two limitations of MIG.
- f) Describe pipe line welding codes.

3. Attempt **any two** :

**(8×2=16)**

- a) Describe the process of TIG welding with neat sketch.
- b) Describe the process of submerged arc welding with neat sketch.
- c) What do you mean by micro welding ? What are the problems with this welding ?

**P.T.O.**



4. Attempt **any two** : **(8×2=16)**
- a) Draw and explain Plasma arc welding.
  - b) List the advantages and disadvantages of resistance welding.
  - c) What is weld distortion ? State and explain any two types of distortion.
5. Attempt **any two** : **(8×2=16)**
- a) Describe the process of atomic hydrogen welding with neat sketch.
  - b) Describe the process of welding of ceramics material.
  - c) Describe the following welding codes :
    - i) ASME
    - ii) AWS
6. Attempt **any four** : **(4×4=16)**
- a) List the different metals that can be welded by MIG welding.
  - b) Draw a neat sketch of ultrasonic welding.
  - c) Describe the welding process of composite material.
  - d) Draw a neat sketch of FCAW.
  - e) State the advantages and disadvantages of ESW.
  - f) List the factors which affect the selection of welding fixtures.
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