17621

16172

3 Hours / 100 Marks Seat No. | | | | | | | | |

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

Marks

1. Attempt **any five** from the following : **(5×4=20)**

a) State four basic components of TIG welding. Explain the function of welding torch in TIG welding.

b) Define Electroslag welding. State it's principle of operation.

c) What are the equipments used in MIG welding ? State the limitations of MIG welding.

d) Define :

i) Friction welding ii) Inertia welding.

e) Explain process equipment welding codes.

f) Give advantages and disadvantages of resistance welding (any four).

g) Define distortion in welded fabrication. State the types of distortion.

2. Attempt **any four** of the following : **(4×4=16)**

a) State the effects of molten flux on weld joints in submerged arc welding.

b) Explain flux cored arc welding with suitable sketch.

c) State the advantages and disadvantages of thermit welding.

d) Define resistance welding. State it's any two applications.

e) Explain ultrasonic welding.

f) State general safety practices in welding.

3. Attempt **any two** : **(2×8=16)**

a) Explain precision welding with suitable sketch. State it's advantages and applications.

b) What is welding codes ? Explain piping welding codes.

c) State the factors influencing the choice of welding technique. State the precautions in welding of certain metals.

P.T.O.

Marks

4. Attempt **any four** of the following : **(4×4=16)**

a) What are the shielding gases used in TIG welding ? State the functions of shielding gases in TIG welding.

b) What is the limitation of submerged arc welding ? State it's applications.

c) State advantages and disadvantages of electroslag welding.

d) State or name the methods of latest welding for :

i) Welding of plastics

ii) Welding of ceramics

iii) Welding of composite materials

iv) Welding of alloys.

e) How flux cored arc welding different from TIG and MIG welding ?

f) Explain structural welding codes.

5. Attempt **any four** of the following : **(4×4=16)**

a) Explain Laser cutting and welding.

b) State any four advanced welding equipments needed for the latest methods of welding.

c) Explain plasma arc welding.

d) Explain automatic welding.

e) Differentiate between TIG and MIG welding.

f) What are the factors affecting selection of welding fixtures ?

6. Attempt **any four** of the following : **(4×4=16)**

a) State the applications of

i) Atomic hydrogen welding

ii) Diffusion welding.

b) Explain weld design and joint design in submerged arc welding.

c) Explain welding fixtures in TIG welding.

d) Explain methods of repair and maintenance of welding.

e) Explain Mirero welding.

f) State the applications of :

i) Flux cored arc welding

ii) Electro slug welding.