

# 17455

**21314**

**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.  
(5) Assume suitable data, if necessary.  
(6) Use of Non-programmable Electronic Pocket Calculator is permissible.  
(7) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

**Marks**

- 1. Attempt any FIVE of the following:** **20**
- a) List and draw any four types of points used in welding.
  - b) State any four factors which affects the selection of power sources.
  - c) Define weld ability and state any two factors affecting it.
  - d) State any four welding defects and also state remedies for this defects.
  - e) State the principle of soldering.
  - f) What are the different types of coatings used for electrodes?
  - g) Explain TIG welding process.

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- 2. Attempt any FOUR of the following:** **16**
- a) State the types of gas welding flames and explain any one.
  - b) What is arc stability?
  - c) State any four limitations of brazing.
  - d) State the types of heat treatment used in welding.
  - e) Differentiate between soldering and welding.
  - f) State any two advantages and limitations of gas welding.
- 3. Attempt any TWO of the following:** **16**
- a) Explain with neat sketch oxy acetylene welding.
  - b) Explain arc structure with a neat sketch.
  - c) State the types of welding methods used for mild steel and explain any one method.
- 4. Attempt any TWO of the following:** **16**
- a) State the types of metal transfer mechanism and explain any one with neat sketch.
  - b) What are the processes used for welding of stainless steel? Explain any one.
  - c) State any four welding defects and give causes of each of the defect.

**5. Attempt any FOUR of the following:****16**

- a) State the effects of welding on the properties of metals.
- b) Compare brazing and soldering (any four points).
- c) Explain functions of the filler metals used in brazing.
- d) How welding of aluminium is done?
- e) Draw and explain any two positions of welding.
- f) What kind of care is required for storage of electrodes?
- g) State the different types of welding equipment used in gas welding.

**6. Attempt any TWO of the following:****16**

- a) Explain the process of solidification in welding.
  - b) Draw and explain HAZ.
  - c) Give the limitations and applications of soldering.
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