

22568

12425

03 Hours / 70 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:** **10**
- a) State the advantages of hot working of metal.
 - b) List the equipments used in wire drawing.
 - c) State the principle of rolling.
 - d) State any four essential qualities of core.
 - e) State the types of pattern.
 - f) Define Weldability.
 - g) List some important properties of plastics.

P.T.O.

- 2. Attempt any THREE of the following:** **12**
- a) Explain construction and working of two high rolling mill with sketch.
 - b) Explain stretch forming process.
 - c) State the advantages, disadvantages and applications of extrusion.
 - d) State any four design consideration in casting.
- 3. Attempt any THREE of the following:** **12**
- a) Explain the steps in forging operations.
 - b) Compare hot rolling and cold rolling.
 - c) Sketch cupola furnace and name its parts.
 - d) Explain the process of sand preparation and sand conditioning.
- 4. Attempt any THREE of the following:** **12**
- a) Compare direct and indirect extrusion.
 - b) Explain investment casting with the help of sketch.
 - c) Suggest suitable remedies for following casting defects.
 - i) Blow boles
 - ii) Cold Jhat
 - iii) Hot Tears
 - iv) Shift
 - d) Explain electron beam welding with a sketch.
 - e) Compare TIG and MIG welding.

5. Attempt any TWO of the following: 12

- a) Explain seam welding with sketch. Also state its applications.
- b) Suggest relevant joining process for following joints and justify your answer.
 - i) Printed circuit board
 - ii) Grills and safety doors.
 - iii) 1 mm thick stainless steel vacuum chambers.
 - iv) Cutting tips and tool sharp.
 - v) Thin sheet steel cupboards
 - vi) Boiler vessels.
- c) Define calendering. Describe with sketch extrusion moulding process.

6. Attempt any TWO of the following: 12

- a) Compare hot and cold chamber die casting processors.
 - b) Explain soldering process with sketch. State its advantages and applications
 - c) Explain with neat sketch compression moulding process.
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