

22568

23242

3 Hours / 70 Marks

Seat No.

--	--	--	--	--	--	--	--

- 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) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

- 1. Attempt any FIVE of the following: 10**
- List two prominent advantages of cold working.
 - List two major advantages of hot working.
 - State any two main fields of application of ‘extrusion’.
 - State any four advantages of wood as ‘Pattern Material’.
 - Define Rapping or Shake Allowance.
 - Define ‘Welding’.
 - Enlist important properties of plastics.
- 2. Attempt any THREE of the following: 12**
- Explain upset forging operation with the help of a neat sketch.
 - Describe impact extrusion process with neat sketch.
 - State hot spinning process with suitable example.
 - List any four important beneficial properties of moulding sand.

P.T.O.

- 3. Attempt any THREE of the following:** **12**
- a) Describe any four advantages of 'Press Forging'.
 - b) Sketch and illustrate the working of three high rolling mill.
 - c) Define core. List any four elements of gating system.
 - d) Describe investment casting with the help of a neat labelled sketch.
- 4. Attempt any THREE of the following:** **12**
- a) Draw a neat sketch and illustrate wire drawing operation.
 - b) Describe a common colour scheme for pattern.
 - c) Sketch and label any four casting defects.
 - d) Explain in brief different types of flames in gas welding.
 - e) Identify the suitable joining process for the following :
 - i) Joining carbide tip to tool shank
 - ii) Joining electronic components to PCB
 - iii) Car body manufacturing
 - iv) Radiators, assembly of pipe to fittings.
- 5. Attempt any TWO of the following:** **12**
- a) Draw a neat labelled sketch of 'Electron Beam Welding'. State its principle of working and any two disadvantages.
 - b) Compare Arc welding with Gas welding with respect to following :
 - i) Energy / Fuel used
 - ii) Temperature
 - iii) Strength of joint
 - iv) Surface finish
 - v) Welding speed
 - vi) Electrode & filler rod
 - c) With neat sketch describe the process of 'Blow moulding' for plastics and state its applications.

6. Attempt any TWO of the following:**12**

- a) Draw a neat sketch of 'Cupola' and list its drawbacks as foundry furnace.
 - b) Describe the following 'Welding defects'.
 - i) Undercut
 - ii) Porosity or voids
 - iii) inclusions
 - iv) burning
 - c) Compare Thermosetting Plastic and Thermoplastic Plastic. (Any four points including definitions) quote three examples of each.
-