

22446

12526

3 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) 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) List types of chips produced in Machining processes.
 - b) List any four operation performed on the Lathe.
 - c) List any four parts of standard shaper.
 - d) State four different types of pattern.
 - e) Name at least two products manufactured by vacuum forging.
 - f) State the principle of rolling.
 - g) State the applications of MIG welding.
- 2. Attempt any THREE of the following :** **12**
- a) Explain the mechanics of chip formation with neat sketch.
 - b) Explain any four properties of Moulding Sand.
 - c) Compare Hot Rolling with Cold Rolling.
 - d) Explain open die and closed die in forging operations.

P.T.O.

- 3. Attempt any THREE of the following :** **12**
- a) Explain with neat sketch Thread cutting operation on Lathe machine.
 - b) Draw a neat sketch of Radial drilling machine and label all the parts.
 - c) Explain vertical shaper machine with neat sketch.
 - d) Explain calendaring process of plastic.
- 4. Attempt any THREE of the following :** **12**
- a) Draw neat sketch of slotting machine and explain its construction.
 - b) Explain with neat sketch Injection Moulding.
 - c) List the types of rolling mills. Explain Four high rolling mills.
 - d) Explain with neat sketch direct extrusion process.
 - e) Compare between soldering and brazing.
- 5. Attempt any TWO of the following :** **12**
- a) Explain with neat sketch following drilling operations.
 - i) Reaming
 - ii) Boring
 - iii) Counter sinking
 - b) Explain construction and working of cupola furnace.
 - c) Determine different defects in welding. State their causes and remedies.

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

- a) Describe the following casting defects with their causes and remedies.
 - i) Porosity or pinholes
 - ii) Blow Holes
 - iii) Short run
 - b) Explain quick return motion mechanism used in shaper with neat sketch.
 - c) Draw neat sketch of following forging methods :
 - i) drop forging
 - ii) press forging
 - iii) upset forging
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