

22446

21222

3 Hours / 70 Marks

Seat No.

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15 minutes extra for each hour

- Instructions* – (1) All Questions are *Compulsory*.
(2) Answer each next main Question on a new page.
(3) Figures to the right indicate full marks.
(4) 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) Explain in short mechanics of chip formation.
 - b) Enlist types of moulding sand.
 - c) Differentiate between soldering and brazing.
 - d) State applications of extrusion process.
 - e) Enlist elements of tool signature of single point cutting tool.
 - f) Give classification of shaping machines.
 - g) State the various elements of gating system in moulding process.
- 2. Attempt any THREE of the following: 12**
- a) State various types of chips. Explain any one with neat sketch.
 - b) Explain with sketch quick return mechanism used in shaping machine.
 - c) Differentiate between TIG and MIG welding.
(atleast four points)
 - d) Explain open and closed die in forging operations.

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- 3. Attempt any THREE of the following: 12**
- a) Explain with neat sketch thread cutting operation on lathe machine.
 - b) Explain with neat sketch laser beam welding.
 - c) Explain hot and cold rolling. State their applications.
 - d) Explain calendering process of plastic.
- 4. Attempt any THREE of the following: 12**
- a) Explain with basic diagram parts of slotting machine and state their functions.
 - b) List out safety precaution to be taken in foundry shop.
 - c) Explain with sketch upset forging operation.
 - d) State various application of extrusion processes.
 - e) Explain centrifugal casting method with neat sketch.
- 5. Attempt any TWO of the following: 12**
- a) Explain various drilling machine operation with neat sketch. (atleast three)
 - b) Explain direct and indirect extrusion. State their advantages and disadvantages.
 - c) List out various casting defects and state their remedies.
- 6. Attempt any TWO of the following: 12**
- a) Explain construction and working of cupola furnace.
 - b) Explain Taper turning operation on lathe machine with neat sketch.
 - c) Explain with neat sketch working principle of shaping.
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