

22446

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 answer 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) List different types of cutting parameters of lathe machine.
 - b) List the types of slotting machines.
 - c) State the different types of core.
 - d) Define extrusion state its type.
 - e) Define welding. List the types of welding flames in gas welding.
 - f) List the types of allowances in pattern making.
 - g) Name the filler metals used in Brazing.

P.T.O.

- 2. Attempt any THREE of the following:** **12**
- a) Draw neat sketch of the single point cutting tool.
 - b) State the standard specification of slotting machine.
 - c) Differentiate between hot chamber and cold chamber die casting.
 - d) Compare direct and indirect extrusion.
- 3. Attempt any THREE of the following:** **12**
- a) Draw the sketch of twist drill and show the following parts.
 - i) Flutes
 - ii) Helix angle
 - iii) Shank
 - iv) NeckWhy are flutes provided on a twist drill?
 - b) Name the taper turning methods on lathe machine. How taper angle calculations are done in turning process.
 - c) Explain working principle of shaping with neat sketch.
 - d) Define die casting. State the causes and remedies of die casting defects on misrun and soldering.
- 4. Attempt any THREE of the following:** **12**
- a) Find the time required for one complete cut on a workpiece of 60 mm diameter and 400 mm long. The cutting speed is 50 m/min and the feed is 0.5 mm/rev.
 - b) Explain horizontal shaping operation with neat sketch.
 - c) Define furnace. Draw with neat sketch of electric furnace.
 - d) Explain with neat sketch of cold chamber die casting process.
 - e) Explain indirect extrusion process.

- 5. Attempt any TWO of the following:** **12**
- a) Estimate the time required to drill a hole of depth 50 mm in a M.S. plate. The drill diameter is 25 mm and feed is 0.01 mm/rev. Consider an approach and over travel of 2 mm each. The drill cutting speed is 25 m/min.
 - b) State and explain characteristics of moulding sand.
 - c) Explain upset forging with neat sketch.
- 6. Attempt any TWO of the following:** **12**
- a) Draw with neat sketch of slotting machine and explain its parts in brief.
 - b) Explain with neat sketch of precision investment casting and state its applications.
 - c) State the types of rolling mill. Explain with neat sketch of cluster rolling mill.
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