

17402

15162

3 Hours / 100 Marks

Seat No.

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- Instructions* – (1) All Questions are *Compulsory*.
(2) Illustrate your answers with neat sketches wherever necessary.
(3) Figures to the right indicate full marks.
(4) Assume suitable data, if necessary.
(5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. a) **Attempt any SIX of the following:** **12**
- (i) Write names of different types of patterns.
 - (ii) Explain piercing operation with the neat sketch in press working.
 - (iii) Explain thread cutting operation on lathe machine.
 - (iv) Enlist different forging operations.
 - (v) State different types of dies in press working operations.
 - (vi) State principle of rolling with a neat sketch.
 - (vii) Write classification of different types of drilling machines.
 - (viii) What is core and core-prints?
- b) **Attempt any TWO of the following:** **8**
- (i) Enlist different types of allowances provided on pattern. Explain shrinkage allowance.
 - (ii) Describe reaming and spot facing operations on drilling machine.
 - (iii) Describe back-ward extrusion process with a neat sketch.

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- 2. Attempt any FOUR of the following:** **16**
- a) Explain four high roll mill with a neat sketch.
 - b) Draw block diagram of die set components and label it.
 - c) Draw the sketch of gating system of casting process and show all the parts on it.
 - d) Explain blow moulding with a neat sketch.
 - e) What is taper? Enlist different methods of taper turning and describe any one in brief.
 - f) Write applications of rolling and forging operations.
- 3. Attempt any FOUR of the following:** **16**
- a) Describe drawing operation in press working.
 - b) Enlist different properties of moulding sand and describe collapsibility in brief.
 - c) Draw a neat sketch of radial drilling machine.
 - d) Differentiate between open die and closed die forging.
 - e) Write classification of different types of lathe machines.
 - f) Explain TIG welding with a neat sketch.
- 4. Attempt any FOUR of the following:** **16**
- a) Describe upsetting and fullering operations in forging.
 - b) Explain with a neat sketch electron beam welding.
 - c) State different types of press operations and explain any one with figure.
 - d) Explain shell moulding process.
 - e) Draw nomenclature of single point cutting tool.
 - f) Write causes and remedies of blow hole defect in casting.

- 5. Attempt any FOUR of the following:** **16**
- a) Compare notching and lancing (any four points).
 - b) With a neat sketch explain soldering process.
 - c) What are different types of plastics and write useful properties of plastics.
 - d) What is cutting speed and feed in case of lathe machine.
 - e) Compare hot rolling and cold rolling.
 - f) Write classification of press machines.
- 6. Attempt any TWO of the following:** **16**
- a) Write different welding defects and their causes in detail.
 - b) Write different types of plastic moulding processes and explain extrusion moulding process with a neat sketch.
 - c) Explain with a neat sketch, construction and working of cupola furnace.
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