

17402

16117

3 Hours / 100 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. a) **Attempt any SIX of the following:** **12**
- (i) Define ‘forging’, state it’s types.
 - (ii) Explain ‘blanking’ operation with neat sketch.
 - (iii) Write four required properties of moulding sand.
 - (iv) Explain two roll mill with neat sketch.
 - (v) Classify melting furnaces in costing processes.
 - (vi) Write two applications of centrifugal casting.
 - (vii) State the different type’s of dies. (Any four)
 - (viii) Why colour coating is provided on pattern.
- b) **Attempt any TWO of the following:** **8**
- (i) What is rolling ? What are different types of rolling ?
What are it’s applications ?
 - (ii) Explain electron beam welding with neat sketch.
 - (iii) Draw the nomenclature of single point cutting tool showing various element’s on it.

P.T.O.

- 2. Attempt any FOUR of the following:** **16**
- a) Explain closed die forging with neat sketch.
 - b) What is working principle of resistance welding? Explain spot welding process.
 - c) Explain with sketch thread cutting operation in case of lathe machine.
 - d) Explain 'drawing' operation on press machine.
 - e) Write any four forging operations and explain any one of them.
 - f) Describe pit moulding operation in brief.
- 3. Attempt any FOUR of the following:** **16**
- a) How press machines are classified.
 - b) Define extrusion process, state its type's and state application of extrusion process.
 - c) Write any four welding defect's and explain why they occur.
 - d) Compare notching and lancing operation in press working. (At least four points each)
 - e) What is calendering operation in plastic processing ? Explain with sketch.
 - f) Explain with sketch shell moulding process.
- 4. Attempt any FOUR of the following:** **16**
- a) Compare hot rolling and cold rolling. (Atleast four points each)
 - b) State different types of press operations. Explain punching operation with neat sketch.
 - c) What is speed, feed and depth of cut in case of lathe machine.
 - d) Describe vacuume forming process in case of plasting moulding.
 - e) Differentiate between brazing and soldering. (Atleast four points each).
 - f) What are the basic steps involved in making casting ?

5. Attempt any FOUR of the following:**16**

- a) Draw a neat sketch of twist drill and show it's nomenclature.
- b) Describe back-ward extrusion process with neat sketch.
- c) Explain TIG welding with neat sketch.
- d) With sketch explain progressive die in case of press machine.
- e) How lathe machines are classified ? Write in brief.
- f) What are the different allowances provided on pattern ? Describe any one.

6. Attempt any TWO of the following:**16**

- a) Explain with neat sketch 'Injection moulding'. Give it's advantages, limitations and applications.
 - b) How drill machines are classified? and draw neat sketch of radial drilling machine.
 - c) Write any four casting defects and write it's causes and remedies.
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