



B.E / B.Tech (Full Time) DEGREE END SEMESTER EXAMINATIONS, APRIL/MAY 2011

MECHANICAL ENGINEERING BRANCH

THIRD SEMESTER - (REGULATION 2004)

ME 272 – MANUFACTURING TECHNOLOGY-I

Time: 3 hr

Max. Mark: 100

PART- A (10X2 = 20 Mark)

1. Name two applications of centrifuge casting.
2. Why permeability of mould sand is necessary?
3. What do you mean by seamless tube?
4. What is meant by tandem rolling?
5. What is the basic difference between blanking and piercing?
6. What is common between shaving and trimming process?
7. What do you mean by super forging?
8. Which class of plastics can be injection moulded and why?
9. What is the basic difference between soldering and brazing?
10. Name two application of laser beam welding.

PART- B (5 X16 = 80 Mark)

11. Brief on the following:

- | | |
|---------------------------------------|-----|
| (i) Compression moulding process | (5) |
| (ii) Electro magnetic forming process | (5) |
| (ii) Dynapack machine | (6) |

12. (a) Brief on the design factors of gating system pertaining to riser, sprue, chill, pouring basin and runner.

(OR)

(b) Comment on the following with respect to the process and its application:

- | | |
|--------------------------|-----|
| (i) Investment casting | (4) |
| (ii) Die casting | (6) |
| (iii) Centrifuge casting | (6) |

13. (a) (i) Brief on the defects in rolled plates and sheets. (6)

(ii) Explain the process of seamless tube production. (10)

(OR)

- (b) (i) Compare and contrast cold working and hot working. (10)
(ii) Comment on "fibre flow line" in plastic deformation. (6)
14. (a) (i) List the defects and its causes in forging operation. (8)
(ii) What is the significance of parting line, die inserts, draft and trimming? (8)
- (OR)**
- (b) (i) Brief on rotary swaging and tube drawing operation with neat sketch. (12)
(ii) What type of stresses is induced in coining, spinning, blanking and stretch forming? (4)
15. (a) List the different kind of defects that form in welding process, their causes and remedies. (OR)
- (b) Brief on the following welding process:
- (i) Thermit welding (8)
(ii) Friction welding (8)