B. Tech Degree III Semester Examination, November 2009

SE 304 MANUFACTURING PROCESS

(2006 Scheme)

Time : 3 Hours Maximum Marks : 100

PART - A

(Answer ***ALL*** questions)

(8 x 5 = 40)

I. (a) Explain the process of normalizing.
(b) How will you classify non – ferrous metals.
(c) Explain the term "weldability".
(d) What do you mean by "Heat affected zone"? Explain.
(e) Briefly explain the term "shrinkage allowance".
(f) Write notes on investment casting.
(g) Differentiate orthogonal and oblique cutting.
(h) Explain concept Abrasive jet machining.

PART – B

(4 x 15 = 60)

II. (a) List and explain the thermal properties of materials. What is its significance? (8)
(b) Why we do heat treatment of steels? List the various heat treatment process. (7)

OR

III. Write notes on :
(i) Annealing (ii) Normalising
(iii) Hardening (iv) Tempering
(v) Stainless steel. (5 x 4 = 20)

IV. (a) Compare TIG and MIG welding. (6)
(b) How will you conduct inspection of welded joints? What are the various types of weld defects? (9)

OR

V. (a) Compare Laser beam welding and Electron beam welding. (7)
(b) With sketch explain submerged arc welding. (8)

VI. Write notes on :
(i) Core sands (ii) Loose price pattern
(iii) Properties of moulding sand (iv) Slush casting. (4 x 5 = 20)

OR

VII. (a) With sketch explain the process of centrifugal casting. (8)
(b) What is the purpose of die casting? Explain with sketch. (7)

VIII. (a) With sketch explain the process of hot rolling. (8)
(b) What do you mean by extrusion? Explain with sketch. (7)

OR

IX. Write notes on :
(i) Forging (ii) Grinding machines
(iii) USM (iv) ECM
(v) EDM (5 x 4 = 20)

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