

**B. Tech Degree IV Semester Examination, April 2009**

**ME 406 MANUFACTURING PROCESS**

(2006 Scheme)

Time: 3 Hours

Maximum Marks: 100

**PART A**  
(Answer all questions)

(8 x 5 = 40)

- I. a. Describe the elements of a gating system.  
b. Explain advantages of metal casting process.  
c. List any five defects, their causes and remedies of casting process.  
d. Discuss the process of continuous casting.  
e. Differentiate between hot working and cold working.  
f. Explain any five smith forging operations.  
g. Write a short note on TIG welding process.  
h. What is thermit welding process?

**PART B**

(4 x 15 = 60)

- II. a. What is a core? What are the characteristics of a good core? Draw simple sketches of different types of cores. (10)  
b. Write short notes on pattern allowances. (5)
- OR**
- III. a. Describe any eight properties of foundry sand. (8)  
b. Explain any four sand control tests. (7)
- IV. With neat sketches, explain the process of investment casting. Discuss the merits and application of the method. (15)
- OR**
- V. Explain any two Centrifugal casting techniques. (15)
- VI. a. What is 'spring back' in sheet metal bending? Discuss the methods to overcome it. (10)  
b. Differentiate between blanking and punching. (5)
- OR**
- VII. a. Discuss the hot extrusion process. (8)  
b. Discuss the forging defects and remedial measures to minimize them. (7)
- VIII. a. Write a note on Submerged Arc Welding. (7)  
b. Explain the principle of spot welding. (8)
- OR**
- IX. a. With a neat sketch, explain Laser beam welding process. (8)  
b. Briefly describe, Electron Beam Welding Process. (7)

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