

## ***B. Tech Degree III Semester Examination, November 2009***

### **SE 302 MANUFACTURING PROCESSES (2002 Scheme)**

Time : 3 Hours

Maximum Marks : 100

- I. (a) What do you understand by steel? Briefly explain the role of carbon in steels. (10)  
(b) List any eight most commonly used heat-treatment operations. Differentiate between annealing and normalizing. (10)  
**OR**
- II. (a) State and explain the important properties of Cast Iron. (10)  
(b) Differentiate between Brass and Bronze. (10)
- III. (a) Define and explain Weldability. (5)  
(b) Briefly explain shielded metal arc welding process. What are its limitations? (15)  
**OR**
- IV. (a) What do you understand by Heat Affected Zone? Explain. (5)  
(b) Explain briefly Electron Beam Welding Process. State its applications. (15)
- V. (a) What do you understand by a pattern? Explain in detail. (3)  
(b) What are the different types of patterns? Briefly explain with suitable sketches any twelve types. (17)  
**OR**
- VI. (a) Briefly explain the process of investment casting. What are its advantages and limitations? (10)  
(b) Briefly explain the various methods of inspecting castings. (any five methods). (10)
- VII. (a) Differentiate between Hot Working and Cold Working Process. (5)  
(b) Briefly explain the stages involved in the manufacture of seamless pipes/tubes. Also explain the various common methods of manufacture of pipes/tubes. (15)  
**OR**
- VIII. (a) Briefly explain the explosive forming process and its classification. (15)  
(b) List the advantages of explosive forming process (any five). (5)
- IX. With the help of a schematic sketch of a lathe explain the various parts of lathe. (20)  
**OR**
- X. Write short notes on :  
(i) AJM  
(ii) EDM. (20)

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