

***B.Tech. Degree III Semester (Special Supplementary)
Examination, September 2004***

**SE 302 MANUFACTURING PROCESSES
(2002 Admissions)**

Time: 3 Hours

Maximum Marks: 100

(All questions carry EQUAL marks)

- I. What is meant by elastic and plastic deformation?
Explain the mechanism for dislocation in plastic deformation.
OR
- II. Explain briefly the theory of tempering.
Why steel is tempered, and how is it done?
- III. What is the principle of operation of electric arc welding?
Compare the use of direct current and alternating current in arc welding.
OR
- IV. What are the factors that determine the weldability of a metal?
Discuss the structural changes that take place in a metal when it is welded.
- V. What are the common allowances provided on pattern and why?
What are the main characteristics that a good moulding sand should possess?
OR
- VI. What are the main advantages and disadvantages of die-casting?
How does a cold chamber die casting machine differ from a hot chamber machine?
- VII. Explain briefly with neat sketch the process of wire drawing.
How are collapsible tubes produced?
OR
- VIII. Explain the working principle of explosive forming of metals.
What are the merits and demerits of explosive forming?
- IX. What are the factors that influence the selection of cutting tool materials?
Discuss the classification of machine tools.
OR
- X. Explain the working of USM.
What are the limitations of this process as a machining operation?

