

**III B.Tech I Semester Supplementary Examinations, May 2005**  
**MANUFACTURING TECHNOLOGY**  
**(Mechatronics)**

**Time: 3 hours**

**Max Marks: 80**

**Answer any FIVE Questions**  
**All Questions carry equal marks**

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1. (a) Describe various tools used in foundry with neat sketches.  
(b) Describe various types of sands used in foundry.
2. (a) Describe Horizontal Centrifugal Casting Machine with a neat sketch.  
(b) State the advantages and disadvantages of Centrifugal Casting.
3. (a) Briefly explain the importance of various metal working processes.  
(b) Describe recovery, recrystallization and grain growth phenomena in metal working process.
4. (a) Explain the Coining process with a neat sketch.  
(b) Explain impact extrusion process with a neat sketch.
5. (a) Explain the different forging defects and their remedies.  
(b) What are the various sequence of operations involved in hand forging?
6. (a) What is meant by weldability and explain the various factors which govern the weldability of metals?  
(b) What is Open Circuit Voltage (OCV) and arc voltage and mention the functions controlling the setting up of voltage?
7. (a) How the optical flat is used to test the flatness of surface?  
(b) Explain how the flatness and parallelism of the two faces of slip gauge can be tested with the help of optical flat.
8. (a) Differentiate between inter changeability and selective assembly. What are the advantages and limitations of each one of them?  
(b) Describe about limit, fit and allowance.

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