

**ME-102**

B. Tech. (Semester I) Examination - 2011

Manufacturing Processes

*Time: Three Hour*

*Maximum Marks: 50*

Note: Attempt all sections.

**Section - A**

Note: Attempt any ten questions. Each question carries two marks. (2x10=20)

1. Describe with suitable examples plant layout and its different types and applications?
2. What is resilience? When is this property important for a material?
3. Describe the basic differences among the three types of stainless steel.
4. Why normalizing is done. Explain the process of normalizing.

5. Explain the type of flame obtained in any-acetylene gas welding process. Also give their applications?

6. Short Note on (i) Galvanizing  
(ii) Electroplating

7. List five typical components produced by the casting process?

8. What is the object of heat treatment the metal and alloys?

9. Explain with the help of neat sketch the parts of a lathe?

10. Define the terms

- (i) Ceramics and their applications  
(ii) Composite material and their applications

11. Based on % of Carbon. Classify Carbon Steels. How do stainless steel become stainless?

12. Differentiate and Explain

- (i) Blanking and Piercing  
(ii) Quenching and Tempering

13. Explain moulding sands and its desirable properties?

14. Describe casting defect with neat sketch and their remedies?



15. What are the properties which non-ferrous metals possess are not available in ferrous metals?

Section - B

Note: Attempt any two questions. Each question carries fifteen marks. (15x2=30)

1. With the help of schematic sketch describe the basic working principle and important parts of shaper machine. Also describe the difference in operation between shaper and planer.
2. How will you classify the welding process? Explain with suitable applications the working principle of resistance welding.
3. Mention advantages and disadvantages and applications of powder metallurgy. Describe briefly each step involved in powder metallurgy manufacturing processes.
4. Describe the various kinds of pattern in use. What are the allowances provided? When making a pattern? How do the pattern differ from the casting.