



Reg. No. : .....

Name : .....

Fourth Semester B.Tech. Degree Examination, May 2014

(2008 Scheme)

Branch : Mechanical Engineering

08.404 : MANUFACTURING PROCESS (MN)

Time: 3 Hours

Max. Marks: 100



**Instruction :** Answer *all* questions

PART – A

1. What are the advantages and disadvantages of green sand molds ?
  2. What should be the shape and size of a riser for obtaining a sound casting ?
  3. What is dross or slag ? How can it be prevented from becoming a part of the finished casting ?
  4. What are the limitations of gas welding ?
  5. What is the main difference between upset butt welding and flash butt welding ?
  6. Define plasma arc welding. What are its applications ?
  7. Explain the functioning of three-high rolling mill.
  8. Define tube drawing.
  9. What is upset forging ? What are some of the typical products produced by this method ?
  10. What are the basic steps involved in making products by powder metallurgy ?
- (10×4=40 Marks)**

**PART – B****Module – I**

11. a) Explain the different pattern allowances and give their significance.  
b) Explain the various non-destructive inspection methods of cast products.

**OR**

12. a) Describe the procedure of making castings by the investment casting process.  
b) Explain the solidification process in casting. How does solidification of alloys differ from solidification of pure metals ?

**20****Module – II**

13. a) Explain the shielded metal arc welding process and give its applications.  
b) What is friction welding ? Give its advantages and disadvantages.

**OR**

14. a) Explain the method of electron beam welding and give its applications.  
b) With the help of a sketch, explain the significance of different zones in a fusion-weld joint.

**20****Module – III**

15. a) Analyze the wire drawing process and explain the functions of die-angle in wire drawing.  
b) Sketch and discuss the process of rolling of channels.

**OR**

16. a) Illustrate and describe hydrostatic extrusion.  
b) What are the common defects in forged parts ?

**20**