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2119

Reg. No. : .....

Name : .....

**Fourth Semester B.Tech. Degree Examination, April 2011  
(2008 Scheme)**

**P 10.203/08.404 : MANUFACTURING PROCESS (MN)**

Time : 3 Hours

Max. Marks : 100

*Instruction : Answer all questions from Part – A and any one full question from each Module of Part – B.*

**PART – A**

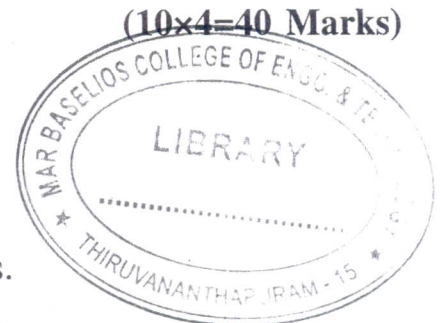
1. What is draft allowance ? How is it provided for patterns ?
2. State the essential ingredients of a moulding sand.
3. Explain the reasons which make a riser a necessity in castings.
4. What is “Weldability” ? Give the factors affecting weldability of a material.
5. Explain the friction welding process.
6. Explain the principle of ultrasonic welding.
7. Give the importance of powder metallurgy in manufacturing process.
8. Explain the metal spinning process.
9. Differentiate between wire drawing and extrusion process.
10. What is centrifuging ?

**PART – B**

**MODULE – I**

11. a) Explain the shell moulding process with neat sketches.  
b) What is directional solidification ? How is it ensured ?

OR



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12. a) Explain the process of manufacturing cast iron pipes.  
b) Differentiate between gravity die casting and pressure die casting.

MODULE – II

13. a) Explain the submerged arc welding process with a neat sketch.  
b) Explain the principle of atomic hydrogen welding.

OR

14. a) What type of welding is preferred in joining rail road rails ? Explain the principle of the process.  
b) Describe with a neat sketch the EBW process.

MODULE – III

15. a) Explain the different types of rolling mills employed in the rolling process.  
b) Write notes on different types of forging operations.

OR

16. a) Explain with sketches the defects in forging operation.  
b) Describe the different types of compacting operations. **(3×20=60 Marks)**
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