

**B.Tech. MECHANICAL ENGINEERING  
(BTMEVI)**

**Term-End Examination**

**June, 2013**

**BIME-009 : PRODUCTION TECHNOLOGY-I**

*Time : 3 hours*

*Maximum Marks : 70*

---

*Note : Attempt any ten questions. All questions carry equal marks.*

---

1. What metals are generally used for making patterns ? Explain the reasons for their selection. Name any two allowances provided on the pattern for a sand casting and state the reasons why they are provided. 7
  
2. What is meant by grain fineness number ? Explain the procedure for determining this number for a moulding sand. 7
  
3. Briefly explain the process of wire drawing. 7
  
4. List the advantages of forging of metals. Why is press forging preferred over hammer forging process ? 7

5. What is recrystallisation temperature ? 7  
Distinguish between hot working and cold working with respect to this temperature.
6. Differentiate between GTAW and GMAW 7  
processes.
7. Describe the process of hot and cold spinning 7  
stating their advantages and specific uses.
8. Explain the desirable characteristics of core sand. 7  
What are the normal binders used in core sand ?  
Sketch different types of cores used in foundry.
9. Explain with neat sketch the ultrasonic welding 7  
process. Also give its advantages and disadvantages.
10. Describe types of plastics. Explain any one plastic 7  
moulding process with the help of neat diagram.
11. What are the common defects of casting ? State 7  
their causes and remedies.
12. What do you understand by directional 7  
solidification ? What is gating system ? Describe,  
giving sketches, various types of gates.