

Code No: R05310303

**Set No. 1**

**III B.Tech I Semester Regular Examinations, November 2008**  
**PRODUCTION TECHNOLOGY**  
**( Common to Mechanical Engineering, Mechatronics and Automobile Engineering)**

**Time: 3 hours**

**Max Marks: 80**

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

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1. (a) What are composite moulds? Why are they used? Where are they used?  
(b) What are different types of gates in sand moulding process? [9+7]
2. Explain with the help of neat sketches, the construction and working of the following types of crucible furnaces.  
(a) Coke fired pit furnace  
(b) A gas fired crucible furnace  
(c) An oil fired tilting furnace [6+5+5]
3. (a) What are the basic requirements of welding? Explain.  
(b) Describe the gas welding process with neat diagram. [8+8]
4. (a) How heat is generated in frequency induction welding? Explain.  
(b) What are the different zones of HAZ and how it affects the strength of weld? [8+8]
5. (a) What are the various parameters those influence the rolling load? Explain.  
(b) What is strain hardening? Explain in detail. [8+8]
6. (a) Explain residual stresses in rods, wires and tubes drawn.  
(b) Explain the process of piercing. How does it differ from hot spinning? Explain. [8+8]
7. (a) What is the difference between open die forging and impression die forging?  
(b) What are the attractive features of extrusion process? [8+8]
8. (a) Describe your opinion regarding the recycling of plastics vs the development of plastics that are biodegradable.  
(b) Explain how you would go about determining the hardness of plastics. [8+8]

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