

II B.Tech II Semester Supplementary Examinations, Apr/May 2006
PRODUCTION TECHNOLOGY-I

(Common to Mechanical Engineering and Aeronautical Engineering)

Time: 3 hours**Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

1. (a) Enumerate the special materials added to the molding sand to improve its qualities. What is the effect of each one of them? [10+6]
(b) Differentiate between parting sand and molding sand.
2. (a) How are the moisture content and clay content of a molding sand are tested ? [8+8]
(b) Explain with a neat sketch the working and use of a sand rammer.
3. (a) Explain the applications of shell moulding process. [6+10]
(b) Describe the types of risers and their uses with suitable sketches.
4. (a) Give the procedure in operating Low-pressure plant and High-pressure plant in gas welding. [6+5+5]
(b) Explain the electrical characteristics of an arc?
(c) Explain how an Arc is initiated in welding.
5. (a) Why is cleaning of metal important for successful resistance welding? Explain. [8+8]
(b) State the purpose of Thermit welding. Where would you recommend it and why?
6. (a) Explain the following types of weld defects and the causes for these defects [8+8]
 - i. Shrinkage crack
 - ii. Slag inclusion
 - iii. Under cut
 - iv. Warpage.
(b) Explain the following metal joining techniques
 - i. Wave soldering
 - ii. Torch Brazing
7. (a) Classify the plastics with examples. [5+6+5]
(b) What are the forms of raw materials for processing plastics in to products?
(c) Justify plastics as engineering materials
8. (a) What are the advantages of powder metallurgy process? [8+8]

- (b) What are 'cermets'? Give a few examples of useful applications of powder metallurgy.

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