

42711

Name :

Reg. No:



SEVENTH SEMESTER B.TECH (ENGINEERING) DEGREE EXAMINATION, MAY 2013

ME 04 704 - METAL CASTING AND JOINING

Time : Three Hours

Maximum : 100 Marks

PART A

1. What is the difference between the solidification of pure metals and metal alloys?
2. Describe the parameters on which solidification time depends?
3. How a shell mould casting is made?
4. Illustrate the various components of a gating system?
5. Differentiate between arc welding and gas welding?
6. Explain the use of straight and reverse polarity in welding?
7. What is weldability?
8. What is meant by weld quality? Discuss the factors that influence it?

(8 x 5 = 40 marks)

PART B

9. Explain the different pattern allowances and their needs? (15 marks)
OR
10. Compare the different melting furnaces in detail. (15 marks)
11. Sketch and explain Centrifugal casting process. (15 marks)
OR
12. What are the major defects that can occur during casting process? Explain the reasons for these defects? (15 marks)
13. Sketch and explain TIG welding? Also list out its advantages. (15 marks)
OR
14. With the help of a neat sketch, explain submerged arc welding process? Also list out its advantages? (15 marks)
15. Explain different types of brazing methods? (15 marks)
OR
16. (a) How different is adhesive bonding from other joining methods? State its limitations (8 marks)
(b) Describe the difference between brazing and soldering? (7 marks)
