

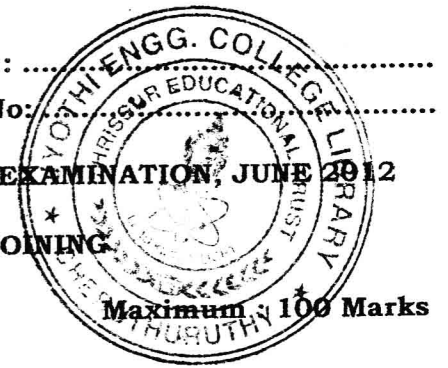
28965

Name :

Reg. No:

SEVENTH SEMESTER B.TECH (ENGINEERING) DEGREE EXAMINATION, JUNE 2012

ME 04 704 – METAL CASTING AND JOINING



Time : Three Hours

- I (a) Explain the capillary action in brazing process.
(b) Explain the basic principles of arc welding processes.
(c) Explain about Chvorinov's rule.
(d) Explain solidification cracking in welding of austenitic chromium nickel steel.
(e) Compare Plaster mould casting with Ceramic mould casting.
(f) What is meant by directional solidification?
(g) Explain the different welding defects.
(h) What is the difference between sand and shell mold casting?
(8 x 5 = 40 Marks)
- II (a) Explain the slush casting and mention its advantages.
(Or)
(b) Explain the different types of products which is made up of sand cast and permanent mould cast.
- III (a) When cells grow into a convecting fluid, they grow preferentially upstream. Explain qualitatively.
(Or)
(b) Explain the reasons why heat transfer and fluid flow are so important in metal casting.
- IV (a) Explain in detail about the concept of solidification of metals.
(Or)
(b) Explain the working principle of Cupola furnace with neat sketch and state its advantages.
- V (a) Describe the sequence of steps in (i) EBM; (ii) LBW.
(Or)
(b) Explain the reactions that take place in an oxy-fuel gas torch. What is the level of temperatures generated?
(4 x 15 = 60 Marks)
