

B.Tech II Year II Semester (R13) Regular Examinations May/June 2015
MANUFACTURING TECHNOLOGY
(Mechanical Engineering)

Time: 3 hours

Max. Marks: 70

PART – A
(Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
- (a) List out materials used for patterns.
 - (b) Define gating ratio.
 - (c) State the types of risers.
 - (d) Give the applications of investment castings.
 - (e) Write the classification of welding processes.
 - (f) What do you mean by water plasma?
 - (g) Write the applications of TIG welding.
 - (h) With suitable sketch list the different regions of HAZ.
 - (i) Give the applications of surface treatment processes.
 - (j) Write about different types of surface coatings.

PART – B
(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

- 2 (a) Explain the various types of allowances provided in patterns.
(b) Explain the components of a gating system with a neat diagram.
- (OR)
- 3 (a) Explain various types of patterns.
(b) Discuss the difference between the solidification of pure metals and neat sketch and list its applications and advantages.

UNIT – II

- 4 (a) Explain with neat sketch the cold chamber die casting process with neat sketch and list its applications and advantages.
(b) Discuss the casting defects.
- (OR)
- 5 (a) Describe the oil fired tilting type of crucible furnace with suitable diagram.
(b) Explain the design of feeding system.

UNIT – III

- 6 (a) Explain the Thermit welding with neat sketch.
(b) Define plasma. Explain with suitable sketch the principle of plasma arc welding.
- (OR)
- 7 (a) Differentiate between Gas and Arc welding processes and mention their applications and limitations.
(b) Describe the characteristics of various flames used in gas welding and their applications.

UNIT – IV

- 8 (a) List the various inert gases used in welding processes and explain their advantages.
(b) Discuss the different types of welding defects and its remedies.
- (OR)
- 9 (a) Differentiate between the destructive and non-destructive tests in welding.
(b) What are the steps in brazing? Discuss the suitability of brazing for dissimilar metal joining.

UNIT – V

- 10 (a) Explain the principle of thermal modification of surfaces.
(b) Discuss the characteristics of surface treatment process.
- (OR)
- 11 Explain the following: www.ManaResults.co.in
- (a) Overlay coatings.
 - (b) Diffusion coatings.
