

B.Tech II Year II Semester (R13) Supplementary Examinations May/June 2017

MANUFACTURING TECHNOLOGY

(Mechanical Engineering)

Time: 3 hours

Max. Marks: 70

PART – A
(Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
- (a) What is the function of sprue?
 - (b) Why core prints are used in casting?
 - (c) Write the formula for finding solidification time in Caine's method.
 - (d) Classify the various types of furnaces.
 - (e) Mention the code used for electrode designation.
 - (f) Name the four types of non-ferrous metals.
 - (g) Define brazing.
 - (h) Write the principle involved in forge welding process.
 - (i) Define diffusion coating.
 - (j) List out any two advantages of surface treatment processes.

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

UNIT – I

- 2 Explain different types of pattern allowances in detail.
- OR**
- 3 With neat sketches describe the elements of a gating system.

UNIT – II

- 4 Define and classify centrifugal casting. Explain the working principle involved in true centrifugal casting with a neat diagram.
- OR**
- 5 Describe the various defects which are likely to be caused in sand castings because of higher pouring temperatures.

UNIT – III

- 6 What is the principle involved in Gas Metal Arc Welding (GMAW) with a block diagram.
- OR**
- 7 Explain resistance spot welding process with a neat sketch.

UNIT – IV

- 8 Describe the working principle of Tungsten Inert Gas (TIG) welding process with neat sketch.
- OR**
- 9 Write short notes on the following welding processes:
- (a) Friction welding.
 - (b) Explosion welding.

UNIT – V

- 10 (a) Write the benefits of surface treatment processes.
(b) Explain shot peening and water peening.
- OR**
- 11 Describe with the help of a neat sketch any one type of thermal spraying process which is applied for surface treatment.