Code: 15A03404 **R15**

B.Tech II Year II Semester (R15) Supplementary Examinations December 2018

MANUFACTURING TECHNOLOGY

(Mechanical Engineering)

Time: 3 hours Max. Marks: 70

PART – A

(Compulsory Question)

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1 Answer the following: (10 X 02 = 20 Marks)

(a) State any four patterns and their allowances.
(b) What is core venting and function of core?
(c) List any four advantages of centrifugal casting.
(d) List any four functions of riser.
(e) Name any four the chemicals used in flux manufacture.
(f) Differentiate between oxy-acetylene and air-acetylene welding.
(g) List any four applications of TIG welding process.
(h) Is flux necessary in Brazing process? If yes why?
(i) Significance of surface coating.
(j) List the advantages and disadvantages of peening.

PART – B

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

UNIT – I

2 (a) Describe various materials used for making patterns.
(b) Briefly explain jolt squeeze machine for mould preparation.

OR

3 (a) What is core? Explain the function and need of core in foundry.
(b) Write a short note on solidification of pure metal.

UNIT – II

4 (a) Briefly explain cold-chamber die casting process with a neat sketch.
(b) What are the disadvantages and application of investment casting?

OR

5 With a neat sketch, explain construction and zones of cupola furnace.

UNIT – III

6 (a) What is the principle of resistance welding and explain the seam welding?
(b) Describe plasma arc welding.

OR

7 What are the different types of gas flames? How are they formed?

UNIT – IV

8 With a neat sketch, explain the explosive welding process. Mention the advantages, limitations of the process.

OR

9 (a) Briefly explain the various steps in adhesive bonding and soldering process.
(b) List the various welding defects and brief their causes and remedies.

UNIT – V

10 Explain briefly the surface treatment processes.

OR

11 Briefly explain diffusion coatings and mechanical modification of surfaces.

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