

B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

August 2023 Semester End Make-Up Examinations

Programme: B.E.

Branch: Mechanical Engineering

Course Code: 22ME3PCMAP / 19ME3DCMAP

Course: Manufacturing Processes

Semester: III

Duration: 3 hrs.

Max Marks: 100

Date: 10.08.2023

Instructions: 1. Answer any FIVE full questions, choosing one full question from each unit.
2. Missing data, if any, may suitably be assumed.

UNIT - I

- 1 a) List and explain different steps in making a casting with the help of flow chart. 10
- b) What is manufacturing? classify manufacturing process and briefly explain. 10

OR

- 2 a) What is pattern? Mention its functions and materials used for pattern. 10
- b) List out the moulding machines, with a neat sketch explain sand slinger. 10

UNIT - II

- 3 a) Describe bottom gate with a neat sketch. 06
- b) Explain the methods of controlling directional solidification. 06
- c) List and explain degasification methods. 08

OR

- 4 a) With a neat sketch explain gravity die casting, mention its advantages and disadvantages 10
- b) Mention the types of defects in casting with a neat sketch explain the causes and remedies. 10

UNIT - III

- 5 a) What is welding? mention its advantages, limitations and applications. 10
- b) Explain the formation of different weld zones, list out the welding defects causes and remedies. 10

UNIT - IV

- 6 a) What is powder metallurgy? list out the advantages, limitations and applications. 10

Important Note: Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Revealing of identification, appeal to evaluator will be treated as malpractice.

- b) Explain with a neat sketch atomization method in powder metallurgy. List out special techniques in powder metallurgy. 10

UNIT - V

- 7 a) What is rapid prototyping? List out the advantages, limitations and applications. 10
- b) Write a short note on (i) Stereo lithography apparatus (ii) Laser engineered net shaping. 10

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