

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

Autonomous Institute Affiliated to VTU

## August 2023 Semester End Make-Up Examinations

**Programme: B.E.**

**Semester: III**

**Branch: Mechanical Engineering**

**Duration: 3 hrs.**

**Course Code: 22ME3PCMAP / 19ME3DCMAP**

**Max Marks: 100**

**Course: Manufacturing Processes**

**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

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

\*\*\*\*\*

B.M.S.C.E., ODD SEM 2022-23