



**B.Tech IV Semester Regular/Supplementary Examinations, July 2021**  
**Manufacturing Process**  
(Mechanical Engineering)

**Maximum Marks: 70**

Date:04.08.2021 Duration: 3 hours

- Note:
1. This question paper contains two parts A and B.
  2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
  3. Part B consists of 5 Units. Answer any one full question from each unit.
  4. Each question carries 10 marks and may have a, b, c, d as sub questions.

**Part-A**

**All the following questions carry equal marks (10x2M=20 Marks)**

- 1 List the properties of molding sand.
- 2 What are the merits of centrifugal casting process?
- 3 Compare welding and casting.
- 4 Give the applications of Thermit welding.
- 5 List the merits of TIG welding.
- 6 Mention a few non-destructive testing on welds.
- 7 What is the significance of strain hardening in metal forming?
- 8 Mention the types of presses.
- 9 Compare direct and indirect extrusion.
- 10 What is swaging?

**Part-B**

Answer All the following questions. (5X10M=50Marks)

- 11 Give an account of pattern materials and pattern allowances. [10]  
OR
- 12 Explain the concept of nucleation and grain growth during solidification of castings with figures. [10]
- 13 Describe the types of resistance welding process with neat sketches. [10]  
OR
- 14 Explain the principle of oxy-acetylene welding with special reference to types of flames. [10]
- 15 Describe the process of MIG welding with a neat sketch. Give the process merits. [10]  
OR
- 16 List and give an account of various defects in welds. [10]
- 17 Discuss the theory and principle of metal rolling with special reference to forces and power requirements. [10]  
OR
- 18 (a) Compare hot and cold spinning.  
(b) Describe tube drawing with a neat sketch. [5+5]
- 19 Compare the hydrostatic extrusion and impact extrusion with necessary diagrams. [10]  
OR
- 20 List and give an account of various forging methods. [10]

