

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY-GURUJADA VIZAINAGARAM
II B. Tech II Semester Supplementary Examinations NOV -2025
MANUFACTURING PROCESSES
(ME)

Time: 3 hours

Max. Marks: 70

The Question paper consists of Part A & Part B.

Part A is compulsory, Answer all questions. Part B Answers any one question from each unit.

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| 1 | <p style="text-align: center;">PART-A</p> <p>a) What is the function of Riser? [2]</p> <p>b) List the basic ingredients of moulding sand. [2]</p> <p>c) What is carburizing flame? [2]</p> <p>d) Write the applications of Forge welding. [2]</p> <p>e) What is hot working process? [2]</p> <p>f) Define the term forgeability. [2]</p> <p>g) What are Notching and Slitting operations? [2]</p> <p>h) Describe the spinning method. [2]</p> <p>i) What are the applications of AM? [2]</p> <p>j) What is meant by Post Processing? [2]</p> | (20Marks) |
| | <p>PART-B</p> <p>Question from Unit - I</p> | (50Marks) |
| 2 | <p>a) What is core and explain how to make a core? [5]</p> <p>b) Explain in detail various process steps in investment casting process. [5]</p> <p style="text-align: center;">(OR)</p> | |
| 3 | <p>a) Explain solidification of alloys in casting. [5]</p> <p>b) Discuss in detail on process capabilities and the applications of centrifugal casting process [5]</p> | |
| | <p>Question from Unit - II</p> | |
| 4 | <p>a) What are different welding joints and their characteristics? [5]</p> <p>b) With neat sketch explain about electron beam welding. [5]</p> <p style="text-align: center;">(OR)</p> | |
| 5 | <p>a) Explain the causes of welding defects and their remedies. [5]</p> <p>b) Write a note on the following [5]</p> <p style="padding-left: 20px;">a) Laser welding b) Electron beam welding.</p> | |
| | <p>Question from Unit - III</p> | |
| 6 | <p>a) State the significance of recrystallization in metal forming. [5]</p> <p>b) Discuss wire drawing process with neat sketch. [5]</p> <p style="text-align: center;">(OR)</p> | |
| 7 | <p>a) Explain briefly the mechanism of plastic deformation in metals and alloys? [5]</p> <p>b) Discuss in brief on open die and closed die forging. [5]</p> | |
| | <p>Question from Unit - IV</p> | |
| 8 | <p>a) Explain the working of Electro hydraulic forming process. [5]</p> <p>b) Write the principle of explosive forming and its applications. [5]</p> <p style="text-align: center;">(OR)</p> | |
| 9 | <p>a) Describe rubber pad forming and its advantages and limitations. [5]</p> <p>b) Write the working of electromagnetic forming process with a neat sketch. [5]</p> | |
| | <p>Question from Unit - V</p> | |
| 10 | <p>a) Discuss about VAT photopolymerization technique. [5]</p> <p>b) Explain the working principle of FDM. [5]</p> <p style="text-align: center;">(OR)</p> | |
| 11 | <p>a) Discuss the Classification of the AM processes. [5]</p> <p>b) Write about extrusion - based AM Processes. [5]</p> | |
