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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR  
(AUTONOMOUS)B.Tech II Year II Semester Supplementary Examinations July-2022  
MANUFACTURING PROCESSES  
(Mechanical Engineering)

Time: 3 hours

Max. Marks: 60

**PART-A**

(Answer all the Questions 5 x 2 = 10 Marks)

- |   |   |    |    |
|---|---|----|----|
| 1 | a What is gating ratio?                             | L2 | 2M |
|   | b What are the qualities of flame used for welding? | L1 | 2M |
|   | c What are the types of forging processes?          | L1 | 2M |
|   | d What is Metal pinning?                            | L1 | 2M |
|   | e What is film blowing?                             | L1 | 2M |

**PART-B**

(Answer all Five Units 5 x 10 = 50 Marks)

**UNIT-I**

- |   |   |    |    |
|---|---|----|----|
| 2 | a What do you understand by cold cracks and warp age? What are Remedies for them? | L4 | 5M |
|   | b What are the rules for satisfactory design to obtain the good castings?         | L2 | 5M |

**OR**

- |   |   |    |    |
|---|---|----|----|
| 3 | a With neat sketch explain the construction and working of cupola furnace | L4 | 5M |
|   | b With neat sketch explain shell molding process                          | L4 | 5M |

**UNIT-II**

- |   |   |    |    |
|---|---|----|----|
| 4 | a Differentiate between the welding, brazing and soldering processes. | L2 | 5M |
|   | b What are the common welding troubles; causes and remedies for them? | L2 | 5M |

**OR**

- |   |   |    |    |
|---|---|----|----|
| 5 | a Explain Laser beam welding and its advantages with neat sketch. | L2 | 5M |
|   | b Explain the classification of welding processes briefly.        | L2 | 5M |

**UNIT-III**

- |   |  |    |    |
|---|--|----|----|
| 6 | a Explain hot working process with an example, its processes used. | L4 | 5M |
|   | b What is open, impression die forging? Give its applications.     | L2 | 5M |

**OR**

- |   |  |    |    |
|---|--|----|----|
| 7 | a What are the defects in forged parts? How we can rectify the same? | L4 | 6M |
|   | b Explain cold working process with applications & limitations.      | L2 | 4M |

**UNIT-IV**

- |   |  |    |    |
|---|--|----|----|
| 8 | a Explain the Stretch forming operations & its applications.             | L4 | 6M |
|   | b What explosives are used in explosive forming & how safety is ensured? | L2 | 4M |

**OR**

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|---|--|----|----|
| 9 | a Classify materials used in punch, ram, die, die block in drawing work. | L2 | 5M |
|   | b Write the Formability of sheet metal characteristics.                  | L4 | 5M |

**UNIT-V**

- |    |  |    |    |
|----|--|----|----|
| 10 | a Explain the working principles and application of Transfer Moulding. | L4 | 5M |
|    | b Explain the polymerization briefly.                                  | L2 | 5M |

**OR**

- |    |   |    |    |
|----|---|----|----|
| 11 | a Explain the structure of thermo plastic and thermosetting plastics. | L2 | 5M |
|    | b what are the foamed plastics and state how foaming is done.         | L4 | 5M |

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