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**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR**  
(AUTONOMOUS)

**B.Tech II Year II Semester Supplementary Examinations July-2021**

**MANUFACTURING PROCESSES**

(Mechanical Engineering)

Time: 3 hours

Max. Marks: 60

**PART-A**

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

- |          |          |                                   |           |
|----------|----------|-----------------------------------|-----------|
| <b>1</b> | <b>a</b> | Define AFS grain fineness number. | <b>2M</b> |
|          | <b>b</b> | What is brazing?                  | <b>2M</b> |
|          | <b>c</b> | Define impact extrusion.          | <b>2M</b> |
|          | <b>d</b> | Define wrinkling.                 | <b>2M</b> |
|          | <b>e</b> | What are the types of plastics?   | <b>2M</b> |

**PART-B**

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

**UNIT-I**

- |          |          |   |           |
|----------|----------|---|-----------|
| <b>2</b> | <b>a</b> | Explain investment-casting process with neat sketch and its applications. | <b>5M</b> |
|          | <b>b</b> | What do you understand by external hot tears? How they are caused.        | <b>5M</b> |

**OR**

- |          |          |  |           |
|----------|----------|--|-----------|
| <b>3</b> | <b>a</b> | What are different pattern allowances? Explain with neat sketch. | <b>5M</b> |
|          | <b>b</b> | Explain neat sketch centrifugal casting process.                 | <b>5M</b> |

**UNIT-II**

- |          |          |  |           |
|----------|----------|--|-----------|
| <b>4</b> | <b>a</b> | Difference between soldering, brazing and welding. | <b>5M</b> |
|          | <b>b</b> | Explain working oxy acetylene gas welding          | <b>5M</b> |

**OR**

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|----------|----------|--|-----------|
| <b>5</b> | <b>a</b> | Write short notes on submerged arc welding process and its applications. | <b>5M</b> |
|          | <b>b</b> | What are different applications welding process.                         | <b>5M</b> |

**UNIT-III**

- |          |          |   |           |
|----------|----------|---|-----------|
| <b>6</b> | <b>a</b> | What are the process used rolling process.                          | <b>5M</b> |
|          | <b>b</b> | What is the cold working process with applications and limitations? | <b>5M</b> |

**OR**

- |          |          |   |           |
|----------|----------|---|-----------|
| <b>7</b> | <b>a</b> | What are the advantages of rolling process?                   | <b>6M</b> |
|          | <b>b</b> | What are the defects in forging parts? How can we rectify it? | <b>4M</b> |

**UNIT-IV**

- |          |          |   |           |
|----------|----------|---|-----------|
| <b>8</b> | <b>a</b> | What is metal pinning? And explain.           | <b>6M</b> |
|          | <b>b</b> | What is the magnetic pulse forming operation? | <b>4M</b> |

**OR**

- |          |          |   |           |
|----------|----------|---|-----------|
| <b>9</b> | <b>a</b> | Explain with sketch of deep drawing operations.                               | <b>5M</b> |
|          | <b>b</b> | What are the tools used in shearing, bending, forming and drawing operations? | <b>5M</b> |

**UNIT-V**

- |           |          |   |           |
|-----------|----------|---|-----------|
| <b>10</b> | <b>a</b> | What are the major considerations in the design of plastic parts? | <b>5M</b> |
|           | <b>b</b> | What is the difference between thermo and thermosetting plastics? | <b>5M</b> |

**OR**

- |           |          |  |           |
|-----------|----------|--|-----------|
| <b>11</b> | <b>a</b> | State how joining and machining of plastics are carried out. | <b>5M</b> |
|           | <b>b</b> | Explain briefly about calendaring with neat sketch.          | <b>5M</b> |

\*\*\*END\*\*\*