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# UNIVERSAL INSTITUTE OF ENGINEERING & TECHNOLOGY

# LALRU , MOHALI -140501

**MECHANICAL ENGINEERING ASSIGNMENTS**

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| **Course Name** | : | Manufacturing Technology |
| **Course Code** | : |  |
| **Class** | : | B. Tech V Semester |
| **Branch** | : | ME |
| **Year** | : | 2020 – 2021 |
| **Course Coordinator** | : | Nishant Dhiman, Assistant Professor |

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| **S. No** | **Question** |
| **ASSIGNMENT-I**  |
| 1 | Explain various manufacturing processes. As an engineer when would you prefer selecting Casting as a manufacturing process? |
| 2 | Define a mould. Make a sketch of a mould and identify its different elements |
| 3 | Draw a sketch to describe the procedure of placing sprue and risers in sand mould  |
| 4 | Compare the solidification times for castings of three different shapes of same volume: Cubic, cylindrical(with height equal to its diameter) and spherical. |
| 5 | Explain different types of flames with neat sketches in gas welding process. Give applications for each type. |
| 6 | Compare resistance upset butt and flash butt welding process |
| 7 | Define polarity as applied to DC arc welding. How is this advantageously used? |
| 8 | Discuss parameters used in resistance spot welding process. Give the industrial applications of spot welding process |
| 9 | Can we join dissimilar materials? If so give those process names and describe the basic principle of working |
| 10 | Which one of the following NDT would be used to examine a completed weld for surface defects: (a) Ultrasonics (b) Dyepenetrate (c) Radiography (d) Acoustics Explain that process. |
| **ASSIGNMENT – II** |
| 1 | Explain how do you find the force requirement in drawing? |
| 2 | Explain bending. How do you find the forces required for bending of sheet metal? |
| 3 | What are various types of stamping techniques? Explain in detail. |
| 4 | How are Blanking and piercing operations performe simultaneously in making compound die? |
| 5 | How is tool life estimated in Blanking and piercing techniques? |
| 6 | Discuss the evolution of RP systems indicating the history and their growth rate in the industrial sector |
| 7 | Summarize the key aspect of rapid prototyping. Explain With an example the historical development of rapid prototype technologies |
| 8 | Draw the geometry of cutting tool. |
| 9 | Explain, with suitable example, how rapid prototyping and tooling are the good examples as part of computer integrated Manufacturing |
| 10 | What are the defects identified in forging and give remedies for each defects? |

# Prepared By:

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# HOD, MECHANICAL ENGINEERING PRINCIPAL,UIET