

Reg No.: \_\_\_\_\_

Name: \_\_\_\_\_

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**  
FOURTH/FIFTH SEMESTER B.TECH DEGREE EXAMINATION, DECEMBER 2018

**Course Code: ME220**

**Course Name: MANUFACTURING TECHNOLOGY**

Max. Marks: 100

Duration: 3 Hours

**PART A**

*Answer any three full questions, each carries 10 marks.*

Marks

- |   |    |   |   |
|---|----|---|---|
| 1 | a) | What is Casting? Give a brief idea about Investment casting.                  | 5 |
|   | b) | Elucidate about different types of casting defects.                           | 5 |
| 2 | a) | What is rolling? Showcase its advantages over casting.                        | 5 |
|   | b) | Write a brief note about different types of rolling defects with neat sketch. | 5 |
| 3 | a) | Interpret forging. What are the advantages of forging?                        | 5 |
|   | b) | With neat sketch explain about die design features.                           | 5 |
| 4 | a) | Define clamping. Explain principle of clamping.                               | 5 |
|   | b) | Explicate Hinge clamping with neat diagrams.                                  | 5 |

**PART B**

*Answer any three full questions, each carries 10 marks.*

- |   |    |   |   |
|---|----|---|---|
| 5 | a) | With neat sketch demonstrate Coining process.   | 5 |
|   | b) | Why connecting rod of a diesel engine is manufactured with forging techniques?            | 5 |
| 6 | a) | Differentiate between cold and hot extrusion process.                                     | 6 |
|   | b) | Illustrate about wire drawing process with neat sketch.                                   | 4 |
| 7 | a) | Interpret 3-2-1 principle with neat sketch.   | 5 |
|   | b) | Explain Swing clamping procedure with neat sketch.  | 5 |
| 8 | a) | Highlight why clamping is so important and showcase. What are the advantages of clamping? | 6 |
|   | b) | With neat sketch demonstrate locating from circular surfaces?                             | 4 |

**PART C**

*Answer any four full questions, each carries 10 marks.*

- |    |    |   |   |
|----|----|---|---|
| 9  | a) | Determine bending terminology with neat sketch?                         | 5 |
|    | b) | Justify the phenomenon spring back? And how we can overcome springback? | 5 |
| 10 | a) | With neat sketch clarify Rubber forming process with neat sketch?       | 4 |

- |    |    |  |   |
|----|----|--|---|
|    | b) | Elucidate about tube spinning procedure?                                 | 6 |
| 11 | a) | Define welding? Demonstrate weldability.                                 | 3 |
|    | b) | With neat sketch justify any one type of fusion welding?                 | 7 |
| 12 | a) | Elucidate about deep drawing process?                                    | 4 |
|    | b) | With neat sketch explain Flame characteristics of a gas welding process? | 6 |
| 13 | a) | Why welding is important than other joining process?                     | 4 |
|    | b) | Write short note on Resistance welding? Clarify why is it so important?  | 6 |
| 14 | a) | With neat sketch explicate Ultrasonic welding?                           | 5 |
|    | b) | Write short note about Plasma arc welding?                               | 5 |

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