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

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

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Fifth semester B.Tech degree examinations (S) September 2020



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) With neat sketch explain about Gating and risering system used in casting? (5)  
b) Elucidate the advantages of Low pressure die casting? (5)
- 2 a) Elucidate about Wax Castings? (5)  
b) Enumerate the advantages of Slush castings? Explain Slush casting in detail? (5)
- 3 a) With neat sketch explain any four types of rolling mills? (5)  
b) Highlight any five differences between hot rolling and cold rolling? (5)
- 4 a) What is rolling defects? Explain any two rolling defetc with neat sketch. (5)  
b) Explain any one type of rolling methods to make rings? (5)

**PART B**

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

- 5 a) Clarify why critical load carrying machine elements of automotives is manufactured with forging techniques? (6)  
b) Explain the scales in forging? How scale formation adversely affecting dimension of a workpiece? (4)
- 6 a) With neat sketch explain about wire drawing processes? (6)  
b) With neat sketch explain any two extrusion defects? (4)
- 7 a) Define DOF and also mention 3-2-1 Principle of locating? (6)  
b) Explain the term "clamping"? And also mention its applications? (4)
- 8 a) With schematic diagrams explain precision forging? (6)  
b) Interpret about hot extrusion processes? (4)

**PART C**

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

- 9 a) What are the important characteristics about Bending Force in sheet metal? (6)  
b) What is welding? Explain how soidification of weld metal is happening? (4)
- 10 a) With neat sketch explain about rubber forming techniques? (5)

- b) "Welding plays an important role in Mechanical Industry" Justify this statement? (5)
- 11 a) With neat sketch illustrate how we can prevent oxidation while doing welding processes? (5)
- b) Enumerate the advantages of filler rods used in welding? (5)
- 12 a) What is SMAW? Clarify how oxidation can be prevented in SMAW? (6)
- b) With neat sketch explain about Resistance seam welding? (4)
- 13 a) List out the difference between friction welding and stud welding? (5)
- b) With neat sketch explain about Brazing? (5)
- 14 a) Point out the difference between Soldering and Welding? (5)
- b) What is Plasma Arc Welding? Explain its application and advantages? (5)

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