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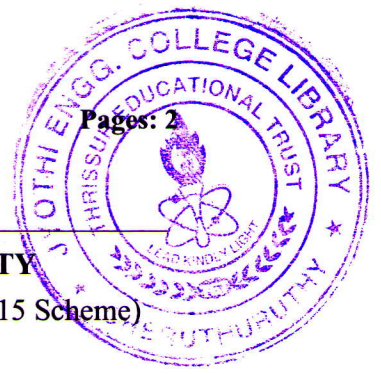
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Reg No.: \_\_\_\_\_

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

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**

Fifth Semester B.Tech Degree (S,FE) Examination January 2022 (2015 Scheme)



**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 are the different types of Molding Sands used for casting? Also explain the properties of molding sand? (10)
- 2 a) What happens if we avoid using Riser system in casting process? (6)  
b) With neat sketch explain any four casting flaws? (4)
- 3 a) With neat sketch explain rolling process in detail? (5)  
b) Explain the process of thread rolling (5)
- 4 a) Briefly explain about how rolling process helps to enhance mechanical characteristics of the material? (10)

**PART B**

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

- 5 a) What is Piercing process in forging? (5)  
b) Does the scale formation can be completely eliminated during forging process? explain? (5)
- 6 a) With neat sketch explain about drawing process? And also mention its advantages over material removal process? (10)
- 7 a) Explain 3-2-1 principle with neat sketch (4)  
b) Define degrees of freedom with a neat sketch. (6)
- 8 a) With neat sketch explain about locating from circular surfaces. (5)  
b) What all the factors to be consider before designing the clamp (5)

**PART C**

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

- 9 a) Bending the sheet metal is the crucial job in sheet metal industry? Justify (5)  
b) How to decide the bending force for sheet metal operations? (5)
- 10 a) Explain the different types of welding flaws with neat sketch (10)

- 11 a) What are the material properties should be consider for deep drawing process? (5)  
b) Define soldering. What are the advantages and disadvantages of soldering? (5)
- 12 a) Explain arc welding process with neat sketch? Explain in detail about electrode rods? (10)
- 13 a) Explain with neat sketch of stud welding? (5)  
b) What are the advantages and disadvantages of Brazing? (5)
- 14 a) What are the basic types of welding joints? (5)  
b) Explain how frictional force helps to do welding operations? (5)

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