

Register No.: ..... Name: .....

## SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

**FOURTH SEMESTER B.TECH DEGREE EXAMINATION (S), AUGUST 2023**

**MECHANICAL ENGINEERING**

**(2020 SCHEME)**

**Course Code : 20MET204**

**Course Name: Manufacturing Process**

**Max. Marks : 100**

**Duration: 3 Hours**

### PART A

*(Answer all questions. Each question carries 3 marks)*

1. Explain the terms pattern, core print and chaplet.
2. What is meant by the term Gating Ratio.
3. Explain the term soldering. How it differs from brazing
4. Write short note on arc welding.
5. Compare Tresca and Von-Mises criteria
6. Specify the need for camber in rolling mills.
7. Write short notes on hot forging and cold forging.
8. Explain deep drawing process with a neat sketch
9. With a neat sketch explain the difference between conventional spinning and shear spinning sheet metal operation.
10. What is spring back in bending operation on sheet metals

### PART B

*(Answer one full question from each module, each question carries 14 marks)*

#### MODULE I

11. Explain the different characteristics/properties of molding sands (14)

**OR**

12. Explain investment casting process with neat sketches (14)

#### MODULE II

13. What are the types of Plasma arc welding processes. Explain with a neat sketch and compare them. (14)

**OR**

14. Explain different welding defects along with sketches (14)

**MODULE III**

15. Explain the rotary tube piercing process with the help of a neat sketch (14)

**OR**

16. Explain rolling process and describe the various types of rolling mills with neat sketch (14)

**MODULE IV**

17. Explain the Skew rolling and Precision Forging with neat sketches. (14)

**OR**

18. Explain Wire drawing and tube drawing processes with neat sketches (14)

**MODULE V**

19. Explain the different locating methods in manufacturing with diagrams (14)

**OR**

20. Describe the Progressive and Compound dies with neat sketches (14)

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