

## CMR ENGINEERING COLLEGE: : HYDERABAD

## UGC AUTONOMOUS

II-B.TECH-I-Semester End Examinations (Regular) - January- 2022

## PRODUCTION TECHNOLOGY

(MECH)

[Time: 3 Hours]

[Max. Marks: 70]

**Note:** This question paper contains two parts A and B.

Part A is compulsory which carries 20 marks. Answer all questions in Part A.

Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

**PART-A****(20 Marks)**

1. a) What are the desirable properties of moulding sand? [2M]
- b) Explain the formation of shrinkage allowances in steel casting. [2M]
- c) Explain the effect of polarity on penetration in DC arc welding. [2M]
- d) Define Heat Affecting zone (HAZ) and write their affecting parameters. [2M]
- e) What is friction welding? What are its applications? [2M]
- f) What are the causes and remedies of welding process: i) Spatter ii) Hot inclusions. [2M]
- g) What are the remedies for spring back? [2M]
- h) Differentiate blanking and piercing? [2M]
- i) Explain the role of lubricant in extrusion. [2M]
- j) Write about any three forging defects, their causes and remedies. [2M]

**PART-B****(50 Marks)**

2. What are the functions of a gating system? Explain with a neat diagram. [10M]
- OR**
3. Explain different steps involved in investment casting with neat diagram. [10M]
  4. Compare gas welding and arc welding techniques. [10M]
- OR**
5. Explain the process of submerged arc welding with neat sketch. What are its advantages? [10M]
  6. With sketch, explain the laser beam welding process. Mention advantages and limitation of laser welding also give application. [10M]
- OR**
7. Differentiate between brazing and soldering techniques and give their applications. [10M]
  8. Explain the classification of rolling mills based on number of rollers with sketches. [10M]
- OR**
9. Derive the force and power requirements in blanking operation. [10M]
  10. Explain about electromagnetic forming process. [10M]
- OR**
11. Write a short note on V-bending and Edge bending with the help of neat sketches. [10M]

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