

Code No.: ME304PC

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CMR ENGINEERING COLLEGE : : HYDERABAD
UGC AUTONOMOUS
II-B.TECH-I-Semester End Examinations (Supply) – August - 2023
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 various defects in casting process? [2M]
- b) List out materials used for patterns. [2M]
- c) Classify the welding processes. [2M]
- d) Illustrate the three types of flames in oxy-acetylene gas welding with neat sketches. [2M]
- e) What are the applications of TIG welding? [2M]
- f) Define Soldering and Brazing. [2M]
- g) Define Blanking and Piercing. [2M]
- h) Outline any three differences between cold working and hot working. [2M]
- i) Describe classification of extrusion processes. [2M]
- j) Explain about smith forging. [2M]

PART-B

(50 Marks)

- 2.a) Explain various types of patterns. [5M]
 - b) Discuss the difference between the solidification of pure metals and neat sketch and list its applications and advantages. [5M]
- OR**
3. Define casting. Describe the various steps involved in obtaining a casting. [10M]
- 4.a) Distinguish between Gas and Arc welding processes and mention their applications and limitations. [5M]
 - b) Describe the characteristics of various flames used in gas welding and their applications. [5M]
- OR**
5. With the help of a neat sketch explain the working of: [10M]
 - i. Thermit welding process.
 - ii. Resistance welding process.
- 6.a) List the various inert gases used in welding processes and explain their advantages. [5M]
 - b) Discuss the different types of welding defects and its remedies. [5M]
- OR**
7. Explain the following welding processes: [10M]
 - i. Friction welding.
 - ii. Explosion welding.
8. Explain recrystallization and grain growth processes and their effect on properties of a metal worked component. [10M]
- OR**
- 9.a) What are the main characteristics of hot working as compared with cold working processes? [5M]
 - b) What are different types of drawing? Explain each with a help of neat sketch. [5M]

- 10.a) Explain the forces in extrusion. [5M]
b) Distinguish between forward and backward extrusion process. [5M]

OR

- 11.a) Describe forging operations and its principles. [5M]
b) Explain briefly about electromagnetic forming process. [5M]
