



MARRI LAXMAN REDDY INSTITUTE OF TECHNOLOGY AND MANAGEMENT

(AN AUTONOMOUS INSTITUTION)

(Approved by AICTE, New Delhi & Affiliated to JNTUH, Hyderabad)

Accredited by NBA and NAAC with 'A' Grade & Recognized Under Section 2(f) & 12(B) of the UGC act, 1956

II B.Tech II Sem Regular End Examination, July 2022

Production Technology

(MECH)

Time: 3 Hours.

Max. Marks: 70

Note: 1. Question paper consists: Part-A and Part-B.

2. In Part – A, answer all questions which carries 20 marks.

3. In Part – B, answer any one question from each unit.

Each question carries 10 marks and may have a, b as sub questions.

PART- A

(10*2 Marks = 20 Marks)

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|-------|--|----|-----|-----|
| 1. a) | Define pattern? What is the difference between pattern and casting? | 2M | CO1 | BL1 |
| b) | Why do you prefer fabricating of metal parts by casting? | 2M | CO1 | BL1 |
| c) | What are the advantages, disadvantages and applications of welding joints over other joints? | 2M | CO2 | BL1 |
| d) | What is the main source of heat in resistance welding? | 2M | CO2 | BL1 |
| e) | Define re-crystalline temperature. | 2M | CO3 | BL1 |
| f) | Differentiate between hot and cold working., | 2M | CO3 | BL1 |
| g) | How do you compare forged components with cast components? | 2M | CO4 | BL1 |
| h) | What is the difference between direct and indirect extrusion. | 2M | CO4 | BL1 |
| i) | Give the advantages of powder metallurgy parts. | 2M | CO5 | BL1 |
| j) | What is the need for selecting additive manufacturing? | 2M | CO5 | BL1 |

PART- B

(10*5 Marks = 50 Marks)

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|-----------|---|-----|-----|-----|
| 2 | What is Pattern? What are the common allowances provided on patterns and why? | 10M | CO1 | BL1 |
| OR | | | | |
| 3 | Explain the various steps involved in the investment casting of metals. | 5M | CO1 | BL4 |
| 4 | a) What is welding? How is it classified? | 5M | CO2 | BL1 |
| | b) Differentiate between soldering, brazing and welding. | 5M | CO2 | BL2 |
| OR | | | | |
| 5 | Explain the various types of joints commonly used in welding. | 10M | CO2 | BL4 |

- 6 With the aid of a sketch, briefly describe the process of spinning. Why is it called a flow turning process? 10M C03 BL1
- OR**
- 7 Bring out the difference between two-high, three-high and four high rolling mills and draw suitable sketches. 10M C03 BL2
- 8 What are the various types of forging methods available to a manufacturing engineer? Explain the application of each of them. 10M C03 BL4
- OR**
- 9 Explain about forward and backward extrusion. 10M C04 BL4
- 10 a) What do you understand by powder metallurgy? What are the main stages of powder metallurgy process? 5M C05 BL1
- b) Explain any one of the atomisation process used for preparing the metallic powder. 5M C05 BL4
- OR**
- 11 Write detailed classification of additive manufacturing. Explain various methods in detail. 10M C05 BL4

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