

Reg. No.

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B.E. / B.TECH. DEGREE EXAMINATIONS, DEC 2019

Third Semester

ME16302 – MANUFACTURING TECHNOLOGY - I*(Mechanical Engineering)***(Regulation 2016)****Time: Three Hours****Maximum : 100 Marks**

Answer ALL questions

PART A - (10 X 2 = 20 Marks)

| | CO | RBT |
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| 1. What do you mean by sweep pattern? | 1 | U |
| 2. Which type of furnace is suitable for producing pig iron and what is the raw material for producing it. | 1 | R |
| 3. How is the acetylene stored in the cylinder? | 2 | U |
| 4. What are the basic components of laser welding? | 2 | U |
| 5. Define cold working of metals. | 3 | U |
| 6. Define slab , plate and sheet. | 3 | U |
| 7. What do you mean by “embossing”? | 4 | U |
| 8. List the applications of super plastic forming process. | 4 | U |
| 9. Name any two different types of compression moulds. | 5 | U |
| 10. What is calendaring processing of plastics. | 5 | U |

PART B - (5 X16 = 80 Marks)

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|---|-----|---|---|
| 11. (a) (i) List out various pattern allowances. Discuss any two in detail. | (8) | 1 | U |
| (ii) Explain any four properties of moulding sand. | (8) | 1 | U |
| (OR) | | | |
| (b) (i) What are the different types of core? Explain any three with a neat sketch. | (8) | 1 | U |
| (ii) Describe with a neat sketch, the cold chamber die casting Machine. | (8) | 1 | U |
| 12. (a) (i) Explain the metal arc welding process with a neat sketch. | (8) | 2 | U |
| (ii) What are the welding defects and give their remedies? | (8) | 2 | U |

(OR)

- (b) (i) Explain the process of thermit welding with a neat sketch and mention its applications. **(8)** **2** **U**
- (ii) Compare and contrast spot welding and seam welding process. **(8)** **2** **U**
13. (a) (i) With a neat sketches, explain upsetting, drawing down and bending operations performed in forging. **(8)** **3** **U**
- (ii) Explain the shape rolling operations. **(8)** **3** **U**
- (OR)**
- (b) (i) What are the defects in parts produced by rolling? Explain any two in detail. **(8)** **3** **U**
- (ii) What is deep drawing operation? Explain with a neat sketch. **(8)** **3** **U**
14. (a) (i) What are the various bending operations? Explain any three with suitable sketch. **(8)** **4** **U**
- (ii) Explain with a suitable diagram, the Rubber pad forming process and list its advantages. **(8)** **4** **U**
- (OR)**
- (b) (i) Explain peen forming process with a neat sketch .Give their advantages and applications. **(8)** **4** **U**
- (ii) Explain with a suitable diagram, the Magnetic pulse forming process. **(8)** **4** **U**
15. (a) (i) What are the various additives used for processing of plastics and name any two with example. **(8)** **5** **U**
- (ii) Explain positive and semi positive type compression moulding. **(8)** **5** **U**
- (OR)**
- (b) (i) Explain with a suitable diagram, the film blowing operation. **(8)** **5** **U**
- (ii) Explain various stages of thermoforming methods of shaping thermoplastics. **(8)** **5** **U**