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Question Paper Code : 90354

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2019

Third Semester

Mechanical Engineering

ME 8351 – MANUFACTURING TECHNOLOGY – I

(Common to Industrial Engineering/Industrial Engineering and Management/
Mechanical Engineering (Sandwich)/Mechanical and Automation Engineering)
(Regulations 2017)

Time : Three Hours

Maximum : 100 Marks

Answer ALL questions.

PART – A

(10×2=20 Marks)

1. Mention the different types of patterns.
2. What are the core prints ? Explain.
3. How the C_2H_2 is preserved in the cylinders ?
4. What are the functions of flux in arc welding ?
5. What is the difference between a bloom and a billet ?
6. What are the four major drawbacks of hot working ?
7. Differentiate between blanking and piercing.
8. What is formability ?
9. What are the advantages and disadvantageous of compression molding ?
10. What are the different plastics used for blow molding ?



PART – B

(5×13=65 Marks)

11. a) i) How the size of the silica sand is identified ? Explain with suitable example. (7)
- ii) Explain the working of sand slinger machine. (6)
- (OR)
- b) i) Explain the CO₂ process for making of cores with neat diagram. (6)
- ii) What is the importance of allowance considered on pattern ? Explain. (7)
12. a) i) What are the differences between friction welding and friction stir welding ? (6)
- ii) Explain the working of gas tungsten arc welding with neat diagram. (7)
- (OR)
- b) i) What are the different welding techniques used in gas welding process ? Explain. (6)
- ii) Explain the working principle of spot welding with neat diagram. (7)
13. a) i) How the tooth paste tubes are manufactured ? Explain the process with neat diagrams. (6)
- ii) What is rolling ? Explain the principle of rolling mills with neat diagrams. (7)
- (OR)
- b) i) How the metallic wires are made ? Explain the process with neat diagram. (6)
- ii) What are the different forging operations ? Explain with neat diagrams. (7)
14. a) i) Explain the metal spinning process with neat diagram. (6)
- ii) Describe the principle of stretch forming operation with neat diagrams. (7)
- (OR)
- b) i) Explain the magnetic pulse forming process with neat diagram. (6)
- ii) Explain the bending operation with neat diagram. Mention the applications. (7)



15. a) i) Explain the principle of operation of transfer molding process with neat diagram. (8)
- ii) Explain the characteristics of plastics. (5)
- (OR)
- b) i) Explain the principle of operation of Blow molding process with neat diagram. (6)
- ii) Explain the principle of operation of injection molding process with plunger and screw set up with neat diagram. (7)

PART – C

(1×15=15 Marks)

16. a) What are the different types of welding defects ? Explain the causes and remedies. (15)
- (OR)
- b) Enumerate the step by step procedure involved in shell molding process. State its advantages and disadvantages. (15)