Reg. No. : | | | | | | | | | | | | |

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 CO_2 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)**