



- Notes :
1. All questions carry marks as indicated.
 2. Solve Question 1 OR Questions No. 2.
 3. Solve Question 3 OR Questions No. 4.
 4. Solve Question 5 OR Questions No. 6.
 5. Solve Question 7 OR Questions No. 8.
 6. Solve Question 9 OR Questions No. 10.
 7. Solve Question 11 OR Questions No. 12.
 8. Due credit will be given to neatness and adequate dimensions.
 9. Illustrate your answers whenever necessary with the help of neat sketches.

1. a) Why allowances are provided on pattern? State the various types of allowances with neat sketch. **6**

b) State the various types of mould. Explain the process of CO₂ moulding with neat sketch. **7**

OR

2. a) What is Core? What are Core prints? Explain the various types of cores used in foundry practice. **6**

b) List out different types of pattern. Describe the following with neat sketches. **7**

- i) Two or three piece pattern.
- ii) Gated pattern
- iii) Sweep pattern

3. a) Explain the elements of gating system with neat sketch. **6**

b) State the various type of furnace used in foundry. Describe the working of Cupola furnace with neat sketch. **7**

OR

4. a) Discuss the causes and suggest the remedies for various casting defects. **6**

b) Explain with neat sketch the process of true centrifugal casting. State its industrial application. **7**

5. a) Explain gas cutting process. Discuss the term kerf and Drag with reference to gas cutting with neat sketch. **7**

b) Define resistance welding. Explain the principle of resistance welding. Also state the applications of resistance welding. **7**

OR

6. a) Explain MIG Welding in details with a neat sketch. 7
b) Explain with neat sketch TIG Welding. Also give its advantages and applications. What is function of inert gas. 7

7. a) Explain principle of forging and explain any one forging process with neat sketch. 7
b) How does direct extrusion differ from indirect extrusion? Discuss their advantage and disadvantage. 7

OR

8. a) What is Rolling process? Show the process with schematic diagram. Also state advantages of rolling over the forming processes. 7
b) Explain following processes : 7
i) Drawing
ii) Forming

9. a) Classify press according to type of frame, type of power, type of transmission. 6
b) Explain with neat sketch cutting die and press terminology. 7

OR

10. a) Explain various types of dies with its application. 6
b) What are the die and punch allowances provided on drawing dies. Explain with neat sketch. 7
11. a) Draw a neat sketch of a screw type injection moulding machine and explain its working. 6
b) Define plastics. What is monomer? How thermoplastic differs from thermosetting plastic. 7

OR

12. a) With neat sketch explain process of transfer moulding. 6
b) Write short note on : 7
i) Wire drawing.
ii) Calendaring.
