



- 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. Assume suitable data whenever necessary.
 10. Illustrate your answers whenever necessary with the help of neat sketches.

1. a) Describe the water Jet Machining process, with neat sketch. What are its advantages, limitations and application. **7**

b) Explain the principle of Electrical Discharge Machining process with neat sketch. Also write advantages, disadvantages and application. **6**

OR

2. a) Explain the Abrasive Jet Machining Process with neat sketch. Also give its advantages, limitation and application. **7**

b) Describe the Laser Beam Machining. What are its advantages, disadvantages and applications. **6**

3. a) Explain the Electro-slag welding with neat sketch. Comment on its advantages, limitations and applications. **7**

b) What is Electron Beam welding? Explain the process with the help of neat sketches, stating its advantages and applications. **6**

OR

4. a) Describe working of MIG welding process. Also state its advantages disadvantages and application. **7**

b) Write short notes on plasma Arc welding with neat sketch. **6**

5. a) Explain the difference between capstan and Turret Lathe with neat sketch. **7**

b) Explain Bar feed mechanism with neat sketch. **7**

OR

6. a) What is HERF? Explain the process of Explosive Forming. **7**

- b) Explain the process of Micro Machining in details. 7
7. a) Explain Mechanical press and its various elements. 7
- b) How presses are classified? Explain with neat sketch. 7

OR

8. a) Describe the following press operations. 7
- i) Punching. ii) Notching.
- iii) Shaving. iv) Trimming.
- b) Explain the process of Bending operation with neat sketch. Also give its application. 7
9. a) Explain 3-2-1 principle of location system in case of jigs and fixtures with neat sketch. 7
- b) What are different types of clamps. Discuss any three types of clamps with neat sketch. 6

OR

10. a) Describe different types of drill jig bushes and their applications with neat sketches. 7
- b) Discuss the classification of milling Fixtures. 6
11. a) Explain Honing process in details with the help of neat sketch. 7
- b) Explain superfinishing process with neat sketch. Also write its advantages, disadvantages and application. 6

OR

12. a) Explain the role of laser in surface modification and give their applications. 7
- b) Explain Buffing and Electroplating process with neat sketch. State its advantages, disadvantages and application. 6
