

**Manufacturing Processes**

P. Pages : 2

**NIR/KW/18/3315/3339**

Time : Three Hours



Max. Marks : 80

- 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.
  11. Use of non programmable calculator is permitted.

1. a) What are various types of allowances provided on pattern? Explain why allowances are provided on pattern? **7**

b) What are different types of moulding sand? Explain the main constituents of moulding sand. **6**

**OR**

2. a) Explain shell moulding with neat sketch. Enlist its advantages & disadvantages. **7**

b) What is core? Explain its utility. Enlist the properties of good coring sand. **6**

3. a) What are the various elements of Gating system. Explain Gating system with neat sketch. **7**

b) Explain with neat sketch the process of Die casting state its advantages and disadvantage. **7**

**OR**

4. a) What are various types of furnaces used in foundry. Explain construction and working of cupola furnace with neat sketch. **7**

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

5. a) Explain submerged arc welding (SAW) with neat sketch. Enlist merits of the process. **7**

b) Discuss in detail with neat sketch TIG system of arc welding give its application. **6**

**OR**

6. a) Explain the process of Thermite welding with neat sketch. **7**

b) Explain the process of resistance welding with neat sketch. State its application. **6**

7. a) Explain "Rolling Process" with neat sketch state various types of rolling mills and explain any two with sketch. 7
- b) What is Extrusion? Explain its various types with neat sketch. 6

**OR**

8. a) Explain the working principle of forging process. Explain any one process with neat sketch. 7
- b) Explain wire drawing with neat sketch. Comment on the utility the process. 6
9. a) Explain "Press terminology" With neat sketch. indicating various elements of it. 7
- b) Explain various die cutting operation with neat sketch. 6

**OR**

10. a) Explain the classification of press on the basis of source of power. 6
- b) Enlist various types of press working dies. Explain four types of dies in detail with neat sketch. 7
11. a) How plastics are classified? Differentiate thermo plastics and thermo setting plastics. indicating their applications. 7
- b) State and explain the process of injection moulding in plastics with neat sketch. Highlight its merits and demerits. 7

**OR**

12. a) Explain with sketch the process of calendaring and embossing. 7
- b) Explain compression moulding and blow moulding with sketch. 7

\*\*\*\*\*