

- N.B. 1) Question No 1 is **Compulsory**  
 2) Attempt any **three** out of the remaining **five** questions  
 3) Figures to the **right** indicate full marks  
 4) Draw neat **sketches** wherever necessary

Q.1) Write short notes on the following (**Any four**) (20)

- Rolling Defects
- Important properties of moulding sand
- Pattern Allowances
- Soldering & Brazing
- Powder Metallurgy

Q.2) Differentiate between the following (20)

- Patterns & Core Boxes
- Thermoplastics & Thermosetting plastics
- Hot working & Cold working
- Open Die Forging & Closed Die Forging.

Q.3) a) Explain the various Casting Defects with their causes and remedies. (10)

- b) Explain the following welding processes with their applications (10)
- Resistance welding
  - Submerged arc welding

Q.4) a) With a neat sketch explain the working principle of plastic injection moulding process. (10)

- b) What is NDT? Explain any two NDT methods in detail. (10)

Q.5) a) With the help of a neat sketch explain the complete gating system in casting process. (10)

- b) Write a brief note on the following (10)
- Centrifugal Casting
  - Flames generated in Gas welding

Q.6) a) i) Compare Press Forging & Drop Forging. ii) Explain Weldability (10)

- b) Write short notes on the following (10)
- Adhesive Bonding
  - Extrusion Process

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