

(3 Hours)

Total Marks: 80

Note:

1. Question No. 1 is compulsory.
2. Attempt any **THREE** out of the remaining **FIVE** questions.
3. Support your answers with sketches wherever necessary.
4. Assume suitable data if necessary.



1. Write short notes on: (20)
 - (a) Types of patterns
 - (b) Slip casting process
 - (c) Welding defects
 - (d) Applications of powder metallurgy
2. (a) Explain with neat sketch the construction, working and application of Abrasive Water Jet Machining (AWJM). (10)
(b) Compare Welding, Soldering and Brazing. (10)
3. (a) Explain MIG welding process in detail? What is the difference between MIG and TIG welding? (10)
(b) Explain the steps involved in the process of powder metallurgy. State its advantages and limitations. (10)
4. (a) Explain the process of Shielded Metal Arc Welding (SMAW) with neat sketch. State its advantages and limitations. (10)
(b) Draw and label a typical sand mold? What is fettling? (10)
5. (a) Describe the composite manufacturing processes of Filament winding and Pultrusion with neat sketches. (10)
(b) Explain the process of Electrical Discharge Machining (EDM) with its advantages, limitations and applications. (10)
6. (a) Explain different types of pressure die casting in detail. (10)
(b) Explain: (i) Thermit welding process (ii) Resin Transfer Molding (10)
