



QP Code :14632

[3 Hours]

[Total Marks: 80

- N.B. :** (1) Question No. 1 is compulsory.
(2) Attempt any **three** questions from Q.No.- 2 to Q. No. 6.
(3) All questions carry equal marks.

1. Attempt the following questions:—
- (a) Classify various welding processes in detail. 5
 - (b) What is meant by blending and compacting in powder metallurgy? 5
 - (c) Compare transfer moulding and compression moulding processes. 5
 - (d) State the function of a riser. 5
2. Attempt the following question:—
- (a) What is the difference between a core and a core print? 5
 - (b) What are the typical application areas of powder metallurgy process? 5
 - (c) Describe injection moulding process for thermoplastics with a neat labeled sketch. 5
 - (d) Describe MPT process with a neat labelled sketch. 5
3. Attempt the following questions:—
- (a) What is meant by solid state welding processes? List various solid state welding processes. Draw a neat labelled sketch of any one solid state welding processes. 5
 - (b) What is meant by sintering? 5
 - (c) Describe lamination process for plastics with a neat labelled sketch 5
 - (d) What is meant by forging? Differentiate between closed die forging and open die forging. 5
4. Attempt the following questions:—
- (a) Draw neat labelled sketches of the various types of cores used in sand casting? 5
 - (b) What is meant by a riser? State the functions of a riser. 5
 - (c) What are the limitations of powder metallurgy processes over other competing processes? 5
 - (d) Describe calendaring process for plastics with a neat labelled sketch. 5
5. Attempt the following questions:—
- (a) Differentiate between MIG welding and TIG welding. 5
 - (b) What are the advantages of using a metal pattern? 5
 - (c) What is blending and compacting in powder metallurgy? 5
 - (d) Describe Ultrasonic Testing process with a neat labelled sketch. 5
6. (a) What is the effect of cold working of metal. 5
- (b) How is swaging process carried out? 5
- Draw a neat labelled sketch to support this.
- (c) Describe resistance seam welding process with a neat labelled sketch. 5
 - (d) Differentiate between direct extrusion and indirect extrusion. Also draw a neat labelled sketch of both of them. 5

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