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   5
state welding processes. Draw a neat labelled sketch of
any one solid state welding processes.
    (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   5
and open die forging.

4. Attempt the follwoing questions:—
    (a) Draw neat labelled sketches of the various types of cores used in   5
sand casting?
    (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   5
competing processes?
    (d) Describe calendering 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 arc 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) Different between direct extrusion and indirect extrusion. Also   5
draw a neat labelled sketch of both of them.