

SE/III/CBES/MECH/Production Process - I/01-06-15



Q.P. Code : 4782

(3 Hours)

[Total Marks : 80

- N.B. : (1) Questions one compulsory
 (2) Solve any **three** questions from the remaining.
 (3) Figure to the **eight** indicates full marks.

1. (a) Explain Pattern allowances. 5
- (b) Explain Rolling defects. 5
- (c) Define the following terms used in welding. 5
 - (i) Welded Joint
 - (ii) Overhead welding
 - (iii) edge preparation
 - (iv) slag
 - (v) Flux.
- (d) How is a rod made by extrusion? 5
2. (a) Differentiate the following: 10
 - (i) Patterns and core boxes.
 - (ii) Wing core and Hanging type of cores.
- (b) Write short notes on: 10
 - (i) Pattern allowances
 - (ii) Types of cores
3. (a) Explain planetary and cluster rolling mills with neat sketches. 5
- (b) Explain rotary swaging with its sketch? 10
- (c) Write short note on: Metal Extrusion. 5
4. (a) Compare TIG and MIG welding Processes? 10
- (b) Discuss laser beam welding along with its advantages and disadvantages. 10
5. (a) How are porous bearings Manufactured? List the advantages and applications of such bearings 10
- (b) Explain advantages and disadvantages powder Metallurgy. 5
- (c) Write the explanatory note on: sintering process in Powder Metallurgy? 5
6. (a) List the different NDT methods? Explain ultrasonic process Method of inspection? 8
- (b) Explain with neat sketch. "Radiographic Non-Destructive test:" 7
- (c) What are the important properties of plastics from engineering point of view?