

Mechanical/Automobile

MECH

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.

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| 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:" | 5 |
| (c) What are the important properties of plastics from engineering point of view? | 7 |

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