

Seat
No.

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मठ - 019

Manufacturing Engineering - I (1040)

P. Pages : 2

Time : Three Hours

Max. Marks : 100

Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Answersheet should be written with blue ink only. Graph or diagram should be drawn with the same pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. All questions are compulsory.
5. Figures to the right indicate full marks.

UNIT - I

1. Solve any two.

- a) What are the main constituents of moulding sand ? Explain the various properties of moulding sand. 10
- b) List the various tests to be carried out in a sand test shop. Explain any two in detail. 10
- c) Write short notes on : 10
 - i) Chaplets.
 - ii) Nomenclature of sand mould.

UNIT - II

2. Solve any two.

- a) Define recrystalline temperature. Describe the characteristics of hot and cold working processes. 10
- b) Discuss the various methods of mechanical working for the production of pipe & tubes. 10
- c) Write short notes on : 10
 - i) Metals used in sheet metal work.
 - ii) Cold forging.

UNIT - III

3. Solve **any two**.
- a) What is welding ? Give detail classification of welding. 10
- b) Describe with neat sketch friction welding and spot welding. 10
- c) Write short notes on : 10
- i) Electrodes.
- ii) Brazing.

UNIT - IV

4. Solve **any two**.
- a) Describe the forming methods used for manufacturing of gears. 10
- b) Explain thread milling process. 10
- c) Write short notes on : 10
- i) Gear burnishing.
- ii) Thread grinding.

UNIT - V

5. Solve **any two**. 10
- a) Compare the following.
- i) Shaping and planing.
- ii) Drilling and Boring.
- b) State and explain the different tool holding devices used on capstan and turret lathe. 10
- c) Explain the following in brief. 10
- i) Swiss type automates.
- ii) Parallel action multi-spindle automates.
