

D 4523

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2007.

Annual Pattern — First Year

Mechanical Engineering

ME 1 X 01 — MANUFACTURING TECHNOLOGY — I

(Regulation 2004)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Write the requirements of a good pattern.
2. What is core venting?
3. What are the special features of friction welding?
4. Define resistance welding process.
5. What is the difference between a bloom and a billet?
6. What is impact extrusion?
7. What is press brake?
8. Define hydro forming process.
9. List the advantages of cold forming of plastics.
10. What is film blowing?

PART B — (5 × 16 = 80 marks)

11. (a) Discuss the necessity of various pattern allowances with a neat sketch.
Or
(b) Explain in detail the working principles of the following:
 - (i) Investment casting
 - (ii) Centrifugal casting.
12. (a) With a neat sketch, explain the process of Submerged arc welding.
Or
(b) Explain the merits, limitations and applications of Electron beam welding.

13. (a) Describe and specify the merits and limitations of the different kinds of rolling mills.

Or

- (b) Compare the differences between hot and cold extrusion process.
14. (a) Explain in detail the working principles and applications of any two special forming process.

Or

- (b) Describe the various test methods used in sheet metal forming.
15. (a) Sketch and explain the injection moulding process for plastics.

Or

- (b) Discuss the advantages and applications of compression and transfer moulding process.
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