

**T 8240**

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2006.

Second Semester

Mechanical Engineering

ME 1151 — MANUFACTURING TECHNOLOGY — I

(Common to B.E. (Part-Time) First Semester Regulation 2005)

(Regulation 2004)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. State any four pattern allowances.
2. State two merits and demerits of CO<sub>2</sub> process.
3. What is the function of flux in welding?
4. What is the principle of Thermit welding?
5. State any two effects produced by Cold-working.
6. What are the two basic types of forging process?
7. What is blanking operation?
8. State the principle of magnetic pulse forming.
9. List out four thermosetting plastics.
10. How are plastics fastened?

PART B — (5 × 16 = 80 marks)

11. (a) (i) Discuss the properties of moulding sand. (8)  
(ii) How are moulding machines classified and briefly explain any two. (8)

Or

- (b) (i) Describe the shell moulding process. (8)  
(ii) Explain the Ceramic moulding process and state its merits and demerits. (8)
12. (a) (i) Sketch the three types of Oxy-acetylene flames and state their characteristics and applications. (8)  
(ii) Describe the electro-slag welding process with a neat sketch. (8)

Or

- (b) (i) What is the principle of resistance welding and explain the seam welding process? (8)  
(ii) Describe plasma arc welding process. (8)
13. (a) (i) Compare press forging and hammer forging. (6)  
(ii) Classify the types of forging machines and describe the pneumatic hammer. (10)

Or

- (b) (i) Explain the tube piercing process. (8)  
(ii) Distinguish hot and cold extrusion process and briefly explain one in each. (8)
14. (a) (i) Describe the explosive forming process. (8)  
(ii) What is super plastic forming? State its merits, demerits and applications. (8)

Or

- (b) (i) Explain rubber pad forming process. (8)  
(ii) How are aluminum kitchen utensils produced? (8)

15. (a) (i) Describe briefly any two thermoplastics and thermosetting plastics. (8)
- (ii) Describe injection moulding process in detail. (8)

Or

- (b) (i) What is thermoforming process? Explain with a neat sketch. (8)
- (ii) Describe film blowing process. (8)
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