**[03 – 2115]**

II/IV B.E. DEGREE EXAMINATION.

First Semester

Mechanical Engineering

MANUFACTURING TECHNOLOGY — I

(Common with M.S. Mechanical Engineering)

(Effective from the admitted batch of 2006–07)

Time : Three hours            Maximum : 70 marks

Question No.1 is compulsory.

Answer any FOUR questions out the remaining.

All questions carry equal marks.

Draw neat sketches wherever necessary.

1. Answer the following in brief :      (7 × 2 = 14)

   (a) What are master patterns?.

   (b) Define core prints

   (c) What is directional solidification?

   (d) Mention various types of furnaces used in forging work?

   (e) Explain the difference between blanking and piercing?

(f) What are the various types of joints commonly used in welding

(g) What is flame cutting?

2. (a) Give common materials used for pattern making? Discuss their merits and demerits? (5)

(b) Describe the working principles and uses of different molding machines with neat diagrams? (9)

3. (a) What are the common tests performed on molding sands? Explain? (7)

(b) What are different types of gates? Explain them with the help of sketches stating the relative merits and demerits of each. (7)

4. (a) What are the different methods used for producing seamless steel pipes? Describe the process with the help of a neat diagram? (9)

(b) What are the common materials used for making the permanent molds? (5)

5. (a) Describe in brief the various types of forgings with neat diagrams. (8)

(b) Differentiate between hot and cold working. (6)

6. (a) With the aid of a sketch, briefly describe the process of spinning. (7)

(b) Using neat sketches explain briefly the process of wire-drawing. (7)

7. (a) Define electric arc welding. Discuss the principle of arc welding with the help of neat sketch. (8)

(b) Compare TIG welding with MIG welding. (6)

8. Write a short note on the following : (3.5 × 4 = 14)

(a) Solid State welding

(b) Thermit welding

(c) Brazing

(d) soldering.

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