[Total No. of Questions - 9] [Total No. of Printed Pages - 2]

Dec-22-0103

ME-103 (Workshop Technology)

B.Tech-1st (CBCS)

Time : 2 Hours **Max. Marks : 40**

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note: Attempt Five questions in all, selecting one question from each section A, B, C and D. Q.No.9 is compulsory.

SECTION A

1. (a) Compare cast iron, wrought iron, mild steel and hard steel.

   (b) How are alloy steels classified on the bases of principal alloying element? (8)

2. (a) Explain hot rolling and various type of rolling mills used in hot rolling.

   (b) Define cold working of metals. What are its advantages and disadvantages? (8)

SECTION B

3. (a) How can you classify the different types of moulding sand?

   (b) What do you understand by the term gating system? (8)

4. (a) Give a list of marking and measuring and describe with sketches the use of any three of them.

   (b) Explain the following carpentry process in brief

   (i) Marking (ii) Sawing (iii) Planing (iv) Boring. (8)

SECTION C

5. (a) Explain various types of lathe used in machine shop.

   (b) Explain following parts of a lathe by neat sketch:

   (i) Lathe Bed (ii) Headstock. (8)

6. Explain the principle of arc-welding. Give a list of equipments required in general for electric arc welding. (8)

SECTION D

7. Explain the Vernier caliper with neat sketch. How its least count can be determined? What are its uses? (8)

8. Define NC, CNC and DNC system. Write advantages of using NC manufacturing over conventional manufacturing. (8)

SECTION E (Compulsory Questions)

9. Short answer type questions:

   (i) How can you specify a lathe?

   (ii) Describe the different wood working processes,

   (iii) Describe the different lathe operations

   (iv) Give the name of different joints in used in wood-working,

   (v) What is a core?

   (vi) Explain in brief use of chills.

   (vii) What is the difference be'weer hard and soft wood?

   (viii) Define hot working of metals. (8)