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

Dec.-23-0349

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 one questions each from Section A, B, C and D. Question no. 9 is compulsory. Any missing data may be assumed appropriately. All questions carry equal marks.

SECTION - A

1. List the types of alloy steels and their characteristics and properties. (8)

2. Classify using a suitable chart the contemporary manufacturing processes. (8)

SECTION - B

3. Differentiate between the cold working, warm working, and hot working operations. Also enumerate their advantages and disadvantages. (8)

4. Illustrate using schematic diagrams the various sheet-metal operations. (8)

SECTION - C

5. Classify welding processes. Discuss the principle of arc generation in electric arc welding. (8)

6. Illustrate graphically the types of open-die forging operations. (8)

SECTION - D

7. Explain briefly the different types of lathe operations. (8)

8. Enlist and briefly explain the, requisite properties for a moulding material in sand casting. (8)

SECTION - E (Compulsory)

9. (a) Give a broad classification of the manufacturing processes.

   (b) Name important fitting tools and their respective uses.

   (c) Differentiate between beazing and soldering.

   (d) List the important properties of wood used for carpentry.

   (e) Draw the neat sketches the types of joints and in carpentry.

   (f) Illustrate the swaging process.

   (g) Explain the positive and negative effect of ramming during mould preparation.

   (h) Illustrate using a sketch the sand casting terminology. (8×1=8)