[Total No. of Questions - 9] [Total No. of Printed Pages - 2]
(2066)

16009(J)

B. Tech 2nd Semester Examination

Workshop Technology (CBS)

ME-103

Time : 3 Hours **Max. Marks : 60**

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, select one question from each sections A, B, C, D. Section E (Question 9) is compulsory.

SECTION - A

1. (a) Explain reasons of utilizing steel in applications useful in daily life. Give atleast five different examples.

   (b) Explain briefly different types of steels. (12)

2. (a) Elucidate process of rolling and wire drawing. What properties a material is expected to possess for being rolled or drawn into a wire?

   (b) Explain various tools utilized in common forming processes showcased in metal working shop. (12)

SECTION - B

3. (a) What are applications of cast components? What is the use of a "core"?

   (b) Explain different types of molding sands and their desirable properties. (12)

4. (a) What are various differences between metallic and non-metallic materials?

[P.T.O.]

   (b) Can we use carpentry hacksaw for metal cutting ? Explain the reasons. (12)

SECTION - C

5. (a) Explain different operations performed on lathe with neat sketches.

   (b) What are differences between milling and grinding operation? (12)

6. (a) Briefly explain various tools utilized in basic welding processes.

   (b) What are the differences in soldering and brazing operation? (12)

SECTION - D

7. (a) What are various types of tools used in fitting operations?

   (b) Elucidate the advantages of Numerical Control systems over traditional manufacturing systems. (12)

8. (a) Explain thread cutting with taps and dies.

   (b) What is the meaning and significance of Numerical Controlled systems in manufacturing? (12)

SECTION - E

9. Briefly explain/fill in the blanks:

   (i) Brass is essentially an alloy having major constituents as.....and.....Give examples of its applications.

   (ii) Elucidate the applications of a soft and hard wood.

   (iii) As the metal starts cooling, capacity of dissolving gases goes on.....(increasing/decreasing). Explain briefly the reason behind it.

   (iv) What are various types of joints in wood? (3×4=12)

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