Printed Pages : 4 | 1321 | NME-101

(Following Paper ID and Roll No. to be filled in your Answer Book)

Paper ID : 140101 | Roll No. | | | | | | | | | |

B.Tech.

(SEM. I) THEORY EXAMINATION, 2015-16

BASIC MANUFACTURING PROCESSES

[Time : 3 hours] **[Total Marks: 100]**

Section-A

1. Attempt **all** sections. All sections carry **equal** mark. Write answer of each section in short. (2×10=20)

   (a) Define toughness. How is it different from resilience?

   (b) How cast iron is classified? Write the percentage of carbon in cast iron.

   (c) What is the purpose of normalizing?

   (d) Why non-ferrous metals are preferred in some applications?

(e) What is the difference between production and productivity?

(f) What is the purpose of Core in casting?

(g) Differentiate between up milling and down milling.

(h) Differentiate between Drilling, Reaming, and Boring?

(i) What is the principle of Resistance Welding?

(j) Give names of different types of plant layout.

Section-B

Attempt **any five** questions from this section. (10×5=50)

2. Discuss in detail stress-strain digram for ductile and brittle materials.

3. What are the types and desirable properties of moulding sand? Discuss different type of casting defects its remedies.

4. Discuss the difference between hot working and cold working processes. With appropriate diagrams explain basic Rolling and Forging processes.

5. Draw the neat sketch of shaper and specify its different parts. How it difers from Planer machine.

6. Explain with neat sketch, the working principle of Extrusion. Describe indirect extrusion and hydrostatic extrusion. State their applications.

7. Explain Gas Welding Process? What are the types of flames used in Gas Welding? Explain Soldering and Brazing.

8. Classify different welding processes. Explain Metal Arc welding in detail with a neat sketch.

9. What are the objectives of plant layout? Write advantages and disadvantages of each plant layout.

Section-C

Attempt **any two** quenstion from this section. (15×2=30)

10. Explain Lathe Machine with neat sketch and also discuss various operations to be performed.

11. Draw the block diagram of a milling machine and describe. What are different operations persormed in milling machine?

12. Write short notes on;

    a) Heat Affected Zone

    b) Cupola Furnace

    c) Die and Punch Assembly.

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