

Printed Pages: 01

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Subject Code: NME101/EME101

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B TECH

(SEM I) THEORY EXAMINATION 2018-19
BASIC MANUFACTURING PROCESSES

Time: 3 Hours

Total Marks: 100

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt all questions in brief. 2 x10 = 20

- a. What do you understand by manufacturing?
- b. Define hardness, stiffness and proof resilience.
- c. Write down the composition and application tool and die steel.
- d. Classify the welding processes.
- e. Define drilling and boring operation.
- f. What do you mean by green sand, write down the composition?
- g. What do you understand by sheet metal working?
- h. Write down advantages of heat treatment.
- i. Define metal forming process.
- j. Define extrusion.

SECTION B

2. Attempt any three of the following: 10 x 3 = 30

- a. What do you meant by steel .how steels are classified, explain high speed steel with composition and their applications.
- b. What do you understand by rolling? Explain the different types of rolling mills.
- c. Explain working principle of shaper with help of neat sketch.
- d. Explain gas welding. Also explain different types of flames appear in gas welding with their applications.
- e. Explain different element of gating system with neat sketch.

SECTION C

3. Attempt any ONE of the following (10x1=10)

- a. Explain stress strain diagram for ductile and brittle material.
- b. Explain the properties and application of brass and bronze with their compositions

4. Attempt any ONE of the following. (10x1=10)

- a. Explain open die forging and closed die forging with help of neat sketch.
- b. Explain compound die and progressive die with help of neat sketch.

5. Attempt any ONE of the following. (10x1=10)

- a. Explain working principle of knee and column type of milling machine with help of proper diagram.
- b. Explain mechanism resistance welding. Also seam welding.

6. Attempt any ONE of the following. (10x1=10)

- a. Explain quenching? What are the advantages of quenching?
- b. Differentiate between production and productivity. Also explain different types of production systems.

7. Write down the short notes on ANY TWO of the following. (5x2=10)

- a. Centrifugal casting
- b. Soldering and brazing
- c. Composite materials.