

B. TECH.
(SEM-I) THEORY EXAMINATION, 2019-20
BASIC MANUFACTURING PROCESS

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 x 10 = 20**

- a. Classify the manufacturing system.
- b. Define specific stiffness and toughness.
- c. Write down the properties of tool and die steel.
- d. Differentiate between soldering and brazing.
- e. What do you mean by gang drilling?
- f. What do you mean by green sand, write down the composition?
- g. Define perforating, and slitting operation.
- h. Write down the functions of heat treatment.
- i. Define press forging.
- j. Write down the name of casting defects.

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

- a. What do you meant by nonferrous metals .write down the properties and applications of copper base alloys?
- b. With help of neat sketch explain the wire drawing process. Also explain tube drawing.
- c. Differentiate between shaper and planner.
- d. Classify the welding process. Also explain principle of arc welding.
- e. Define gating system. Explain different element of gating system with neat sketch.

SECTION C**3. Attempt any ONE of the following 10 x 1 = 10**

- a. Explain ductility, malleability, resilience and fracture strength of the material.
- b. Write down the composition, properties and applications of Aluminium base alloys.

4. Attempt any ONE of the following. 10 x 1 = 10

- a. Write down the advantages of hot working over cold working. What are parameters which influenced hot working process?
- b. With the help of neat sketch explain the working die and punch assembly. Also define the capacity of punch.

5. Attempt any ONE of the following. 10 x 1 = 10

- a. Differentiate between up milling and down milling. Also classify the milling process.
- b. Explain mechanism of solid state welding processes.

6. Attempt any ONE of the following. 10 x 1 = 10

- a. Explain tempering process. Also explain austempering and martempering processes.
- b. Explain the role of manufacturing in the growth of nation.

7. Write down the short notes on any two of the following: 05 x 2 = 10

- (i) Impact extrusion
- (ii) Die casting
- (iii) Composite materials.