

B. TECH
(SEM-III) THEORY EXAMINATION 2019-20
MANUFACTURING PROCESS

Time: 3 Hours**Total Marks: 70****Note: 1.** Attempt all Sections. If require any missing data; then choose suitably.**SECTION A**

- 1. Attempt all questions in brief. 2 x 7 = 14**
- a. Explain the meaning of the expression “ Metal Forming”
 - b. What is the difference between elastic and plastic deformation
 - c. Name the various allowances associated with patterns.
 - d. Define Production and Productivity
 - e. Define ceramics.
 - f. What is the object of electroplating?
 - g. What is HAZ?

SECTION B

- 2. Attempt any three of the following: 7 x 3 = 21**
- a. What are the characteristic properties of copper and aluminium which make them useful to mankind
 - b. What do you mean by rolling? Explain the principle with neat sketch and its application
 - c. Describe at least three methods of taper turning on a centre lathe.
 - d. Explain different types of plant layout with their advantages, disadvantages and applications.
 - e. Describe step by step manufacture of a component by powder metallurgy process

SECTION C

- 3. Attempt any one part of the following: 7 x 1 = 7**
- (a) What is Cast Iron? Explain different types of cast iron.
 - (b) Name three common “Hardness test “.Describe any one of them.
- 4. Attempt any one part of the following: 7 x 1 = 7**
- (a) What do you understand by die forging? Explain the difference between open and closed die forging techniques.
 - (b) Explain construction and operation of cupola furnace with neat sketch and its limitations.
- 5. Attempt any one part of the following: 7 x 1 = 7**
- (a) What do you mean by milling? Explain the working principle and operation of milling with neat sketches.
 - (b) Describe the arc welding process with neat sketch. What role does electrode coating play in producing a satisfactory weld?
- 6. Attempt any one part of the following: 7 x 1 = 7**
- (a) Differentiate between production and productivity. Why is productivity important? Can you suggest some indices for measurement of productivity?
 - (b) What is cause and effect diagram, why we should use cause and effect diagram?
- 7. Attempt any one part of the following: 7 x 1 = 7**
- (a) What is wood? Write the characteristics of wood. Classify the different types of wood
 - (b) Enlist the name of plastic products manufacturing processes. Explain one of them with neat diagram.