**Printed pages: 01** **Sub Code: EME101**

**Paper Id:** | 4 | 0 | 2 | 4 | **Roll No.** | | | | | | | | | | |

**B.Tech.**

**(SEM I) THEORY EXAMINATION 2017-18**

**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. Define fatigue.
b. Differentiate between production and productivity.
c. Write down the composition of stainless steel.
d. Define the term formability.
e. Define the term flux.
f. Write down the function of core in casting.
g. Differentiate between reaming and drilling
h. Write down the advantages of heat treatment.
i. Differentiate between boring and counter boring.
j. Define forging.

## SECTION B

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

**a.** Classify the steel on the basis of percentage of carbon also write down their properties and applications.
**b.** Differentiate between pattern and casting. Also explain different types of pattern allowances provided to patter.
**c.** Explain the working principle of lathe machine with neat sketch.
**d.** Explain the principle of arc welding. Also write down their advantages and disadvantages of arc welding.
**e.** With the help of neat sketch explain gating system.

## SECTION C

**Q.NO.1 Attempt any *ONE* of the following (10*1=10)**

**a.** Define the following
**(i)** Stiffness **(iii)** Hardness
**(ii)** Toughness **(iv)** strength
**b.** Define bronze. Write down the composition and application of different types of bronze.

**Q.NO.2 Attempt any ONE of the following. (10*1=10)**

**a.** With the help of neat sketch explain wire drawing. Also explain forming defects.
**b.** Explain the working principle of press with the help of neat sketch. Also write down the different press operation.

**Q.NO.3 Attempt any *ONE* of the following. (10*1=10)**

**a.** With the help of neat sketch explain the working principle of drilling machine. Also explain different types of drilling operations..
**b.** Define gas welding. Also explain different types of flames in gas welding with their applications.

**Q.NO.4 Attempt any ONE of the following. (10*1=10)**

**(a)** What are the objectives of heat treatment? Also quenching.
**(b)** What are the principles of plant lay out. Also explain different types of plant lay outs.

**Q.NO.5 Write down the short notes on any TWO of the following (5*2=10)**

**(i)** Casting defects **(iii)** Composite materials
**(ii)** Plastics. **(iv)** Extrusion process.