

**B. TECH.****(SEM II) 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**
- Explain input-output model of manufacturing.
  - Differentiate between production and productivity.
  - Write down the properties of tool and die steel
  - Differentiate open die forging and closed die forging.
  - Differentiate between turning and taper turning.
  - Write down the function of sprue in casting.
  - Differentiate v- bending and edge bending
  - Define the term heat treatment.
  - Differentiate between drilling and reaming.
  - Explain mechanical working of metals.

**SECTION B**

- 2. Attempt any three of the following: 10 x 3 = 30**
- Distinguish ferrous and non- ferrous metal. Also explain why nonferrous metal is preferred over ferrous metal.
  - What is alloy steel? Explain some alloy steel with their properties.
  - Differentiate between shaper and planner machine tool.
  - Explain the principle of Arc welding. also write down their advantages and disadvantages of arc welding.
  - How pattern differ from casting. Also explain various pattern allowances.

**SECTION C**

- 3. Attempt any ONE of the following: 10x1=10**
- Explain different types of cast iron with their specific industrial application. Why lathe bed are made of grey cast iron.
  - What are the properties of copper base alloys? Explain different copper base alloys with their industrial application.
- 4. Attempt any ONE of the following: 10x1=10**
- Explain hot working and cold working. Also write down their merits and demerits.
  - Differentiate between cutting dies and forming dies. Also explain the working principle of press with the help of neat sketch.
- 5. Attempt any ONE of the following: 10x1=10**
- With the help of neat sketch explain the working principle of lathe machine. Also explain various operations performed on it.
  - Explain the various defects formed during welding process. Also write down their causes and remedies.
- 6. Attempt any ONE of the following: 10x1=10**
- What are the functions of heat treatment? Also explain tempering process.
  - What are the principles of plant lay out? Also differentiate between process and product lay out.
- 7. Write down the short notes on any one of the following: 10x1=10**
- What are plastics? Explain injection molding with help of neat sketch.
  - Explain with the help of neat sketch die casting. Also write down their advantages and disadvantages.