



Roll No:

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

B. TECH
(SEM I) THEORY EXAMINATION 2020-21
BASIC MANUFACTURING PROCESSES

Time: 3 Hours**Total Marks: 100****Note:** Attempt all Sections. If require any missing data; then choose suitably.**SECTION A****1. Attempt all questions in brief. 2 x 10 = 20**

a.	Define toughness. How is it different from resilience?
b.	Define creep fracture.
c.	Which layout is suitable for batch production?
d.	Differentiate between extrusion and drawing processes.
e.	Draw the sketch of a die and punch assembly
f.	What is the purpose of normalizing?
g.	Give some example of ductile materials.
h.	What do you understand by grit, grade and bond of a grinding wheel?
i.	Why non-ferrous metals are preferred in some application.
j.	Give two examples of forging products. Why draft allowance is provided with pattern.

SECTION B**2. Attempt any three of the following: 10x3=30**

a.	Write short notes on Bronze, their properties and uses.
b.	Make a sketch of centre lathe and label its main parts.
c.	Explain the defects in casting with their properties and uses
d.	Describe the principle of oxyacetylene gas welding. How many types of flames are used for welding
e.	Mention some important uses of rubber. mention any four of its properties

SECTION C**3. Attempt any one part of the following: 10x1=10**

a.	What do you mean by heat treatments? Explain the objective of heat treatments and its process.
b.	Differentiate between hot working and cold working of metals.

4. Attempt any one part of the following: 10x1=10

a.	What is the difference between production and productivity?
b.	Explain Powder metallurgy with application.

5. Attempt any one part of the following: 10x1=10

a.	What are the desirable properties of moulding sand? Explain each in brief.
b.	Explain the difference between soldering and brazing.

6. Attempt any one part of the following: 10x1=10

a.	Discuss in detail stress-strain diagram for ductile and brittle materials.
b.	What are the objectives of plant layout? Write advantages and dis-advantages of each plant layout.

7. Attempt any one part of the following: 10x1=10

a.	Explain with neat sketch the principle of Resistance welding.
b.	Explain the working principle of Cupola Furnace with neat sketch. Also write the limitations.