

Code: 20ME3404

**II B.Tech - II Semester – Regular / Supplementary Examinations
MAY - 2023**

**MANUFACTURING PROCESSES
(MECHANICAL ENGINEERING)**

Duration: 3 hours

Max. Marks: 70

Note: 1. This paper contains questions from 5 units of Syllabus. Each unit carries 14 marks and have an internal choice of Questions.

2. All parts of Question must be answered in one place.

BL – Blooms Level

CO – Course Outcome

			BL	CO	Max. Marks
UNIT-I					
1	a)	Describe the working of cupola with sketch.	L2	CO1	7 M
	b)	Explain the principle of investment casting with necessary sketches.	L2	CO2	7 M
OR					
2	a)	Discuss permanent mould casting, stating its advantages and disadvantages.	L2	CO1	7 M
	b)	List out the defects in casting process; explain any five with neat sketch.	L1	CO2	7 M
UNIT-II					
3	a)	State the main characteristics of hot working as compared with cold working process.	L1	CO1	7 M
	b)	State the advantages and limitations of extrusion process.	L1	CO2	7 M
OR					

4	a)	Explain the various forging operations and list the forging defects.	L2	CO1	7 M
	b)	Explain about hot spinning and cold spinning applications.	L2	CO2	7 M
UNIT-III					
5	a)	Name the kinds of joints that are normally employed for welding processes? Give their sketches.	L1	CO1	7 M
	b)	Explain submerged arc welding process and its applications.	L2	CO2	7 M
OR					
6	a)	Explain the process of Thermit welding with neat sketch. Write its applications	L2	CO1	7 M
	b)	Discuss various welding defects with cause and remedies.	L2	CO2	7 M
UNIT-IV					
7	a)	Differentiate between Destructive and Non-Destructive Testing with examples.	L2	CO1	7 M
	b)	Discuss magneto particle and radiographic inspection testing of weldings.	L2	CO3	7 M
OR					
8	a)	Explain the principle of Eddy Current Testing (ECT). List the properties of eddy current.	L2	CO1	7 M
	b)	Explain the properties required for a good penetrant used in Liquid Penetrant Inspection (LPI)? Differentiate visual penetrants and fluorescent penetrants.	L2	CO3	7 M

UNIT-V					
9	a)	Compare blow moulding and rotational moulding.	L2	CO1	7 M
	b)	Explain the Process Rotational moulding.	L2	CO4	7 M
OR					
10	a)	Discuss briefly surface coatings.	L2	CO1	7 M
	b)	Explain the different stages of manufacturing of powder metallurgy component.	L2	CO4	7 M