

CBCS SCHEME

BME302



USN

Third Semester B.E./B.Tech Degree Examination, Dec.2023/Jan.2024

Manufacturing Process

Time: 3 hrs.

Max. Marks: 100

- Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks , L: Bloom's level , C: Course outcomes.*

Module – 1			M	L	C
Q.1	a.	Define a gating system. Explain with sketches types of gating system.	10	L1	CO1
	b.	Explain with a neat sketch CO ₂ moulding process.	10	L2	CO1
OR					
Q.2	a.	Define pattern and explain with a neat sketches any four pattern allowances.	10	L1	CO1
	b.	Explain in detail the procedure to determine grain fineness number of greens and in foundry lab.	10	L2	CO1
Module – 2					
Q.3	a.	Explain with a neat sketch coreless induction furnace.	10	L2	CO2
	b.	Explain with a neat sketch cupola furnace.	10	L2	CO2
OR					
Q.4	a.	Explain with a neat sketch centrifugal casting process.	10	L2	CO2
	b.	Explain with neat sketches casting defects.	10	L2	CO2
Module – 3					
Q.5	a.	Illustrate the following metal forming processes with neat sketches : i) Bending ii) Piercing iii) Blanking.	10	L2	CO3
	b.	Explain the following yield criteria : i) Tresca yield criteria ii) Von-Mises yield criteria.	10	L2	CO3
OR					
Q.6	a.	Describe compound and progressive die processes.	10	L2	CO3
	b.	Explain the importance of temperature in metal forming and write the differences between hot working and cold working.	10	L2,1	CO3
Module – 4					
Q.7	a.	Explain with neat sketches types of flames produced in OXY-Acetylene welding.	10	L2	CO4
	b.	Explain with a neat sketch OXY-Acetylene gas welding process.	10	L2	CO4
OR					
Q.8	a.	Explain with a neat sketch MIG welding and mention its advantages, disadvantages and applications.	10	L2	CO4
	b.	Explain with a neat sketch Manual metal arc welding and also mention its advantages, disadvantages and applications.	10	L2	CO4
Module – 5					
Q.9	a.	Explain with neat sketches welding defects.	10	L2	CO5
	b.	Explain with a neat sketch residual stresses in welded structures.	10	L2	CO5
OR					
Q.10	a.	Describe the following : i) Soldering ii) Brazing.	10	L2	CO5
	b.	Explain with a neat sketch resistance welding process.	10	L2	CO5
