CBCS SCHEME

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BME302

Third Semester B.E./B.Tech. Degree Examination, Dec.2025/Jan.2026
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.

			M	L	C
		Module – 1			
Q.1	a.	Explain various pattern allowances and their importance.	10	L2	CO1
	b.	Sketch and explain Jolt type moulding machine.	06	L1	CO1
	c.	Define the following terms with reference to the moulding sand: (i) Permeability (ii) Green Strength (iii) Dry Strength (iv) Hot Strength	04	L1	CO1
		OR			
Q.2	a.	Sketch and explain Shell moulding process.	10	L2	CO1
	b.	Give the functions of a riser in a casting. Also, differentiate between open and blind risers.	06	L1	CO1
	c.	Explain the terms 'Core' and 'Chaplet'.	04	L1	CO1
		Module – 2			
Q.3	a.	With a neat sketch explain the constructional features of a Cupola.	10	L2	CO2
	b.	Sketch and explain resistance furnace.	10	L2	CO2
		OR			
Q.4	a.	With a neat labelled diagram explain continuous casting process.	10	L2	CO2
	b.	Explain with neat sketches following casting defects: (i) Hot tears (ii) Cold shut and Misrun	10	L2	CO2
		Module – 3			
Q.5	a.	Explain the following yield criteria : (i) Tresca Criterion (ii) Von Mises Criterion	10	L2	CO3
	b.	Sketch and explain wire drawing. Also list the characteristics of cold working process.	10	L2	CO3
		OR			
Q.6	a.	With a neat sketch explain explosive forming process.	10	L2	CO3
	b.	With a neat sketch explain die-punch assembly used in sheet metal work. Also explain blanking and punching operations.	10	L2	CO3
		Module – 4			
Q.7	a.	Sketch and explain the types of oxy-acetylene welding flames.	10	L2	CO4
	b.	Explain briefly the principle of gas welding. Also list its advantages, disadvantages and applications.	10	L2	CO4
		OR			
Q.8	a.	Sketch and explain submerged arc welding process.	10	L2	CO4
	b.	With a neat sketch explain Tungsten Inert Gas welding process. Mention its advantages and disadvantages.	10	L2	CO4
		Module – 5			
Q.9	a.	With a neat sketch explain various zones in welded structure.	10	L2	CO5
	b.	With neat sketches explain welding defects.	10	L2	CO5
		OR			
Q.10	a.	Write short notes on : (i) Soldering (ii) Brazing	10	L2	CO5
	b.	Explain the following resistance welding processes: (i) Butt Welding (ii) Seam welding	10	L2	CO5

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