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B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

April 2024 Semester End Main Examinations

Programme: B.E.

Semester: III

Branch: Mechanical Engineering

Duration: 3 hrs.

Course Code: 23ME3PCMAP / 22ME3PCMAP

Max Marks: 100

Course: Manufacturing Processes

Instructions: 1. Answer any FIVE full questions, choosing one full question from each unit.
2. Missing data, if any, may be suitably assumed.

			UNIT - I		CO	PO	Marks
Important Note: Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Revealing of identification, appeal to evaluator will be treated as malpractice.	1	a)	Broadly classify the manufacturing processes. Explain in detailed.		CO1	PO1	10
		b)	List the advantages, disadvantages and applications of casting process.		CO1	PO1	10
	OR						
	2	a)	Describe in detailed the steps involved in casting process.		CO2	PO1	10
		b)	Explain various types of pattern allowances. Draw neat sketches wherever necessary.		CO2	PO1	10
	UNIT - II						
	3	a)	Draw a neat sketch of a gating system showing all the elements & explain their functions.		CO2	PO1	10
		b)	With neat sketch explain the progressive and directional solidification.		CO2	PO1	10
	OR						
	4	a)	Describe with neat diagram Investment casting process.		CO4	PO1	10
		b)	List any five types of sand casting defects stating their features and reasons.		CO3	PO1	10
	UNIT-III						
	5	a)	With neat sketch explain the principle operation of Thermit welding process.		CO3	PO1	10
		b)	Explain with diagram the formation of different weld zones.		CO3	PO1	10
UNIT-IV							
	6	a)	Describe the different methods of powder preparation. Draw the sketches wherever necessary.		CO4	PO1	10

	b)	With neat sketches describe the Powder forging, Powder Extrusion techniques.	CO4	PO1	10
		UNIT - V			
7	a)	With neat diagram explain the Fused Deposition process.	CO4	PO1	10
	b)	With neat diagram explain Selective Laser Sintering process.	CO4	PO1	10

B.M.S.C.E. - ODD SEM 2023-24