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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: Industrial Engineering And Management

Duration: 3 hrs.

Course Code: 23IM3PCMAP

Max Marks: 100

Course: Manufacturing Process

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
1	a)	Define single point cutting tool nomenclature. Explain the significance of each part.		<i>CO2</i>	<i>PO3</i>	10
	b)	Describe the Merchants circle diagram and its importance in metal cutting analysis.		<i>CO1</i>	-	10
			UNIT - II			
2	a)	Outline the steps involved in the casting process. Discuss each step briefly.		<i>CO2</i>	<i>PO3</i>	10
	b)	Discuss various pattern allowances and their importance in casting design.		<i>CO1</i>	-	10
			OR			
3	a)	Describe the any two methods of molding using different types of patterns.		<i>CO4</i>	<i>PO3</i>	10
	b)	Explain the concept of the foundry, its types, and classifications based on various factors.		<i>CO2</i>	<i>PO3</i>	10
			UNIT - III			
4	a)	Discuss the use of radiography (X-Ray and Gamma Ray) in NDT.		<i>CO5</i>	<i>PO4</i> <i>PO5</i>	10
	b)	Explain the principle, equipment, operation, and applications of abrasive water jet machining.		<i>CO3</i>	<i>PO2</i>	10
			UNIT - IV			
5	a)	Describe flux shielded metal arc welding (FSMAW) process and its advantages.		<i>CO3</i>	<i>PO2</i>	10
	b)	Explain the principles and applications of laser welding and electron beam welding.		<i>CO2</i>	<i>PO1</i>	10
			OR			

10Important 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.

	6	a)	Explain the explosive welding process and its applications.	CO2	PO1	10
		b)	Outline the principles of submerged arc welding (SAW) and its applications.	CO2	PO1	10
UNIT - V						
	7	a)	Discuss the types of forging hammers and presses and their applications.	CO2	PO1	10
		b)	Describe the types of abrasives used in metal grinding and their classification.	CO3	PO2	10

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