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

Autonomous Institute Affiliated to VTU

December 2023 Supplementary Examinations

Programme: B.E.

Branch: Mechanical Engineering

Course Code: 22ME3PCMAP

Course: Manufacturing Processes

Semester: III

Duration: 3 hrs.

Max Marks: 100

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)	Explain in detailed the steps involved in casting process.	CO1	PO1	10
		b)	List the major applications of casting process.	CO1	PO1	04
		c)	List any three advantages and limitations of casting process.	CO1	PO1	06
OR						
	2	a)	Explain various types of pattern allowances. Draw neat sketches wherever necessary.	CO2	PO1	10
		b)	Describe with neat sketches the process of making green sand mould.	CO2	PO1	10
			UNIT - II			
	3	a)	With neat diagram explain the elements of gating system.	CO2	PO1	10
		b)	Explain in brief the directional and progressive solidification.	CO2	PO2	10
OR						
	4	a)	Describe with necessary sketches the process of investment casting.	CO2	PO1	10
		b)	List any five types of sand casting defects, stating its causes and remedies.	CO3	PO2	10
			UNIT - III			
	5	a)	What is weldability? With neat sketches explain different types of weld joints.	CO2	PO1	10
		b)	Explain metallurgical aspects of welding. Show its different formation of weld zones.	CO2	PO1	10
			UNIT - IV			
	6	a)	Explain the four different methods of powder preparation.	CO4	PO1	10
		b)	Explain with necessary sketches, the powder forging and powder extrusion techniques.	CO2	PO1	10

UNIT - V					
7	a)	List the advantages, disadvantages and applications of Rapid Prototyping.	<i>CO4</i>	<i>PO1</i>	10
	b)	With neat sketch explain Fused Deposition Modeling method.	<i>CO4</i>	<i>PO1</i>	10

SUPPLEMENTARY EXAMS 2023