

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

Autonomous Institute Affiliated to VTU

September / October 2024 Supplementary Examinations

Programme: B.E.

Branch: Mechanical Engineering

Course Code: 20ME7DENDT

Course: Non-Destructive Testing

Semester: VII

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.

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.			UNIT - I	CO	PO	Marks
	1	a)	List the advantages and disadvantages of NDT over DT.	C01	PO1	10
		b)	Sketch and explain the flexible borescope with its application.	C01	PO1	10
			OR			
	2	a)	Explain the principle operating variables in eddy current inspection.	C01	PO1	10
		b)	List out the advantages and disadvantages of eddy current inspection.	C01	PO1	10
			UNIT - II			
	3	a)	Explain the steps involved in liquid penetrant testing.	C02	PO1	10
		b)	List out desired properties of penetrant used in liquid penetrant testing.	C02	PO1	10
			UNIT - III			
	4	a)	Define magnetic particle testing and explain the basic principle of Magnetic particle inspection with a neat sketch.	C03	PO1	10
		b)	Explain the characteristics of magnetic particles used in magnetic particles inspection system.	C03	PO1	10
			UNIT - IV			
	5	a)	Explain principle of radiography test with a neat sketch.	C03	PO1	08
		b)	Explain the principle components of x-ray tube with a neat sketch and also list X-Ray tube operating characteristics.	C03	PO1	12
			UNIT - V			
	6	a)	List and explain the classification of ultrasonic waves.	C04	PO1	12
		b)	With a neat sketch explain the transmission method of ultrasonic testing.	C04	PO1	08
			OR			
	7	a)	Explain the different types of pulse echo methods.	C04	PO1	12
		b)	List the advantages and disadvantages of ultrasonic inspection.	C04	PO1	08