

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION SP/2024)

CLASS: BTECH
BRANCH: MECH

SEMESTER : IV
SESSION : SP/2024

SUBJECT: ME219 NON-DESTRUCTIVE TESTING

TIME: 02 Hours

FULL MARKS: 25

INSTRUCTIONS:

1. The question paper contains 5 questions each of 5 marks and total 25 marks.
 2. Attempt all questions.
 3. The missing data, if any, may be assumed suitably.
 4. Tables/Data handbook/Graph paper etc., if applicable, will be supplied to the candidates
-

		CO	BL
Q.1(a)	Compare the non-destructive evaluation with destructive evaluation.	[2] 1	2
Q.1(b)	Outline the general steps in non-destructive testing.	[3] 1	4
Q.2(a)	Describe the role of penetrant along with its desirable properties.	[2] 1	2
Q.2(b)	Demonstrate the welding defect using liquid penetrant test	[3] 1	3
Q.3(a)	Explain the concept of demagnetization in magnetic particle test.	[2] 2	2
Q.3(b)	With neat sketch describe magnetization using contact current flow method.	[3] 2	3
Q.4(a)	Explain dry and wet magnetic particles.	[2] 2	2
Q.4(b)	Illustrate the limitation in magnetic particle testing.	[3] 2	3
Q.5(a)	Identify the edge and skin effect on eddy current.	[2] 2	2
Q.5(b)	Demonstrate the eddy current testing for flaw detection.	[3] 2	3

:::23/02/2024:::M