

HALL TICKET NUMBER

--	--	--	--	--	--	--	--	--	--

PACE INSTITUTE OF TECHNOLOGY & SCIENCES::ONGOLE
(AUTONOMOUS)

IV B.TECH I SEMESTER END REGULAR EXAMINATIONS, NOV-2022
NON DESTRUCTIVE TESTING & EVALUATION
(ME Branch)

Time: 3 hours

Max. Marks: 60

Note: Question Paper consists of Two parts (Part-A and Part-B)

PART-AAnswer **all** the questions in Part-A (5X2=10M)

Q.No.	Questions	Marks	CO	KL
1.	a) Classify various methods of Non-destructive tests?	[2M]	1	2
	b) Differentiate X rays and Gamma rays.	[2M]	2	2
	c) List the main components of ultrasonic method.	[2M]	3	1
	d) What are the types of penetrants?	[2M]	4	1
	e) What is the concept of magnetography?	[2M]	5	1

PART-BAnswer **One** Question from each UNIT (5X10=50M)

Q.No.	Questions	Marks	CO	KL
UNIT-I				
2.	Explain importance of NDT over Destructive Testing methods.	[10M]	1	2
OR				
3.	Explain the span of NDE activities in railways.	[10M]	1	2
UNIT-II				
4.	Describe about Radiographic Techniques.	[10M]	2	2
OR				
5.	Explain the applications and limitations of X-ray radiography.	[10M]	2	2
UNIT-III				
6.	Draw the Ultrasonic testing flaw detector architecture? Explain.	[10M]	3	2
OR				
7.	What is an ultrasonic transducers and mention their characteristics.	[10M]	3	1
UNIT-IV				
8.	Explain the technique of excess removal of penetrant from the workpiece surface.	[10M]	4	2
OR				
9.	Explain how liquid penetration method is used for non-destructive testing.	[10M]	4	2
UNIT-V				
10.	Explain the any one pressure leak testing methods in detailed.	[10M]	5	2
OR				
11.	Explain the magnetic particles testing method to detect any defects in casting and welding operation.	[10M]	5	2
