



PAPER ID:410713

Roll No: | | | | | | | | | | | | | | | | | | | | | |

BTECH
(SEM VI) THEORY EXAMINATION 2023-24
NONDESTRUCTIVE TESTING

TIME: 3 HRS

M.MARKS: 100

a.	Explain Bragg's Law and What do you mean by attenuation of electromagnetic radiation?	10
b.	Describe the differences between X-ray and gamma-ray. Explain the criteria for choosing one. Explain a case study of the human body X-ray. Explain precautions against radiation hazards.	10
6.	Attempt any one part of the following:	1 x 10 = 10
a.	Briefly describe the transducers used in UI testing. What is the purpose of couplants and how they are used in the inspection process?	10
b.	What do you understand by Piezoelectricity? Explain it. How piezoelectric crystal is used in UI?	10
7.	Attempt any one part of the following:	1 x 10 = 10
a.	Explain the types of probes used in Eddy Current Testing. What are the factors affecting probe selection? What is fill factor?	10
b.	Write Short Notes on a. Thermography and b. Acoustic Emission Testing.	10