

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(ME) (2011 Onwards E-II) (Sem.-7,8)

NON-DESTRUCTIVE TESTING

Subject Code : DE/ME-2.4

M.Code : 72010

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

- 1. Write a short note on following :**

- a) The term NDT.
- b) Eddy current testing.
- c) Magnetic hysteresis.
- d) Acoustic emission testing.
- e) Destructive testing
- f) Visual testing
- g) Dye penetration technique
- h) Magnetic hysteresis
- i) Capillary action
- j) Shot blasting

SECTION-B

2. Explain two ultrasonic inspection techniques for detection of sub layer cracks in the materials.
3. Explain Plane Polarization of electromagnetic waves.
4. What are the advantages and disadvantages of ultrasonic testing?
5. What is known as acoustic emission technique of NDT?
6. Explain the steps followed when conducting magnetic particle inspection?

SECTION-C

7. Discuss the various parameters in radiograph technique. How radiograph technique is used for non destructive testing?
8. Derive the Bragg's equation for detecting inter planer spacing and inter-atomic spacing of material by reflection of X-ray to the crystal plane.
9. What is plane and circular polarization? Discuss its application in non destructive testing.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.