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Total No. of Pages : 02

Total No. of Questions : 18

**B.Tech. (ME) (E-I 2012 Onwards) (Sem.-6)****NON DESTRUCTIVE TESTING**

Subject Code : DE/ME-2.4

M.Code : 71256

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTIONS 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****Answer briefly :**

- Q1. What do you understand by non destructive testing?
- Q2. Write two specific applications of Radiographic examination.
- Q3. What is Xeroradiography?
- Q4. What are magnetization methods?
- Q5. What is sperry detector?
- Q6. How moisture in wood is detected?
- Q7. What are proof tests?
- Q8. What is circular polarization?
- Q9. What is photoelasticity?
- Q10. How surface roughness can be tested?

### SECTION-B

- Q11. Explain principle and method to detect the flaws in rails and tubes.
- Q12. Explain need and significance of non-destructive tests.
- Q13. Explain the procedure to measure thickness, hardness and stiffness.
- Q14. Explain procedure of dye penetration test.
- Q15. Explain working of concrete test hammer.

### SECTION-C

- Q16. Explain working principle and method to detect the defects by using.
- Q17. Explain radiography examination set up. Explain the effect of main process variables in order to get a good radiograph.
- Q18. Explain advantages and limitations of :
- (a) Magnaflux method
  - (b) Ultrasonic method.

**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.**