



EME062

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 140858

Roll No.

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B. Tech.

(SEM. VIII) THEORY EXAMINATION, 2014-15
NON-DESTRUCTIVE TESTING

Time : 3 Hours]

[Total Marks : 100

Note : Attempt all the questions. Assume missing data suitably.

Attempt any four of the following questions : **5x4=20**

- Differentiate between Destructive and Non Destructive testing methods.
- Discuss any Six defects inspected by Non Destructive testing methods.
- What do you mean by Non Destructive testing methods? Explain any one test method in brief
- Differentiate between Manual inspection and Automated inspection.
- What do you mean by visual inspection and what are its types?
- Describe in brief about oil and whiting inspection and Hammer Test.

Attempt any two of the following questions :

10x2=20

- Explain the working principle of magnetic particle testing with a neat sketch. Also mention its scope.
 - Write short note on:
 - Leak test.
 - Zyglo fluorescent penetrant test.
 - Discuss in brief about skin effect, Direct method of magnetization and Wet suspension inspection.

Attempt any two of the following questions :

10x2=20

- What are the advantages of gamma ray radiography over X- ray radiography?
 - Write short note on:
 - Image magnification technique
 - Compton back scatters technique.
 - Mention recommendation followed in film handling.

Attempt any two of the following questions :

10x2=20

- Explain the wave propagation modes used in ultrasonic testing.

- (b) Define Piezoelectricity with example of some piezoelectric material.
- (c) How ultrasonic testing can help in medical diagnosis and inspecting welded joints ?

Attempt any two of the following questions : 10x2=20

- 5
- (a) Explain the working principle of eddy current testing method.
 - (b) Discuss the types of probes used in eddy current testing method.
 - (c) Explain in brief about the rail inspection by eddy current testing method.

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