

CBCS SCHEME

USN

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

15AU663

Sixth Semester B.E. Degree Examination, June/July 2018 Non-Destructive Testing

Time: 3 hrs.

Max. Marks: 80

Note: Answer any FIVE full questions, choosing one full question from each module.

Module-1

- 1 a. With a neat sketch, explain Bubble testing with respect to leak detection. (08 Marks)
b. Mention optical aids used for visual inspection explain any one of them. (08 Marks)

OR

- 2 a. With a neat sketch, explain important steps in Liquid Penetration Test (LPT). (10 Marks)
b. Write short note on "Replication techniques" in brief. (06 Marks)

Module-2

- 3 a. Explain the principle of Magnetic Particle inspection. (06 Marks)
b. Mention advantages, disadvantages and applications of magnetic particle inspection. (10 Marks)

OR

- 4 a. Explain principle of x-ray radiography. (06 Marks)
b. With the help of neat diagram, explain the working of x-ray radiographic equipment. (10 Marks)

Module-3

- 5 a. Explain the principle of Computed Tomography (CT). (08 Marks)
b. Compare CT method with other NDE method and mention important application of industrial CT. (08 Marks)

OR

- 6 a. Explain the principle of Thermal inspection. (06 Marks)
b. With a neat diagram, explain the Thermal inspection method and mention its application. (10 Marks)

Module-4

- 7 a. With the help of a neat sketch, explain the systems and techniques of Acoustic holography. (12 Marks)
b. Mention the application of acoustic holography. (04 Marks)

OR

- 8 a. Explain with a neat sketches the principle and operation of eddy current inspection. (08 Marks)
b. Differentiate between Absolute coils and Differential coils of eddy current inspection. (08 Marks)

Module-5

- 9 a. Write a short note on basic equipments used in ultra sonic testing. (08 Marks)
b. With a neat sketch, explain pulse echo method. (08 Marks)

OR

- 10 a. Explain the principle of Acoustic emission inspection. (08 Marks)
b. Write short note of acoustic emission waves and their propagation. (08 Marks)

* * * * *