

CBCS SCHEME

15MA831

USN

Eighth Semester B.E. Degree Examination, June/July 2019 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. List the various Non – destructive testing methods. (06 Marks)
- b. Compare Destructive and Non destructive testing. (06 Marks)
- c. List the advantages, limitations of Non-destructive testing. (04 Marks)

OR

- 2 a. Briefly explain how visual inspection is performance for testing. (08 Marks)
- b. Explain how Non-destructive testing technique are selected. (08 Marks)

Module-2

- 3 a. Briefly explain the principle of working and procedure of liquid performed testing. (08 Marks)
- b. List the penetrant testing materials and list advantages and application of using it. (08 Marks)

OR

- 4 a. Explain the principle of working and procedure of magnetic particle testing. (08 Marks)
- b. List the advantages and applications of magnetic particle testing. (08 Marks)

Module-3

- 5 a. Explain briefly the principle of working of Eddy current Testing using High sensitivity technique. (08 Marks)
- b. List the advantages application of Eddy current testing. (08 Marks)

OR

- 6 a. Explain briefly the principle of working of Acoustic Emission Testing. (08 Marks)
- b. List the advantages application AET. (08 Marks)

Module-4

- 7 a. Explain the briefly the principle of working of Ultrasonic Inspection methods through Transmission Testing. (08 Marks)
- b. Explain briefly the principle of working of Beam pulse echo Testing. (08 Marks)

OR

- 8 a. Explain the process flow detection by ultrasonic principle. (08 Marks)
- b. Explain: i) A – Scan ii) B – Scan iii) C – Scan. (08 Marks)

Module-5

- 9 a. Explain the principle of Radiography and effect of radiation on Film. (08 Marks)
- b. Explain the Single wall and Double wall penetration inspection technique in detail. (08 Marks)

OR

- 10 a. Explain the basic principle of Holography. (08 Marks)
- b. List the Advantages and limitation of Holography technique. (08 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

