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10AE756

Seventh Semester B.E. Degree Examination, Dec.2018/Jan.2019

Non-Destructive Testing

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions, selecting at least TWO full questions from each part.

PART – A

- 1 a. Explain the factors influencing the reliability of NDE. (10 Marks)
b. Explain defects in materials. (05 Marks)
c. Briefly describe the defects in composite materials. (05 Marks)
- 2 a. Explain the production principle of X-rays. (06 Marks)
b. Describe the defects in welding. (04 Marks)
c. Describe general radiographic procedures. (10 Marks)
- 3 a. Explain the equipments used in ultrasonic. (10 Marks)
b. Explain the variable affecting the ultrasonic test. (10 Marks)
- 4 a. Briefly explain welding inspection in ultrasonic inspection. (10 Marks)
b. Explain the types of scanning in U.S. (10 Marks)

PART – B

- 5 a. Explain the basic concept involved in liquid penetrant test. (10 Marks)
b. Explain test procedure for liquid penetrant test with neat sketch. (10 Marks)
- 6 a. With a neat sketch explain magnetization of materials. (10 Marks)
b. Sketch and explain the principle of magnetic particle test. (10 Marks)
- 7 a. Explain the factors affecting eddy current. (10 Marks)
b. Explain the application of eddy current testing. (06 Marks)
c. Briefly explain the effectiveness of eddy current testing. (04 Marks)
- 8 a. Explain the principle of acoustic emission test with sketch. (10 Marks)
b. Explain the principle of thermal inspection. (10 Marks)

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.