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B.E. (FULL TIME) END SEMESTER EXAMINATION, APRIL / MAY 2019

MANUFACTURING ENGINEERING

SIXTH SEMESTER

MF 8002 – NON DESTRUCTIVE EVALUATION

(Regulation 2012)

Time: 3 hours

Max. Marks: 100

Part - A (10 X 2 = 20 Marks)

1. What are the advantages of holography method?
2. List the materials involved in Liquid penetrant testing method.
3. Mention the classes of magnetic particles in magnetic particle inspection test.
4. What is the principle of neutron radiography?
5. What is radiation contrast and film contrast?
6. List the different type of eddy current techniques.
7. What are the limitations of eddy current testing?
8. State the criteria for the probe selection in ultrasonic testing.
9. Mention the different types of ultrasonic waves.
10. What is Acoustic emission?



Part – B (16 x 5 = 80 marks)

11. Explain the various visual methods of non-destructive testing. (16)
 12. a) Describe magnetic particle inspection test in detail. (16)
- (OR)
- b) Enumerate the processes involved in the liquid penetrant testing method. Also discuss its advantages and disadvantages. (16)

13. a) Discuss about the various parameters influencing the radiographic imaging. (16)

(OR)

b. Discuss the methods of radiographic inspection. Also discuss its limitations. (16)

14. a) Briefly describe the design of ultrasonic transducers with suitable sketches. (16)

(OR)

b) Explain various methods of inspections using ultrasonic testing. (16)

15. a) Describe the instrumentation in the eddy current testing in detail. (16)

(OR)

b) Explain the principle and applications of acoustic emission technique. (16)

