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Reg. No. : .....

Name : .....

**Fifth Semester B.Tech. Degree Examination, December 2015  
(2008 Scheme)**

**08.506.13 : (Elective – I) NON DESTRUCTIVE TESTING (MPU)**

Time : 3 Hours

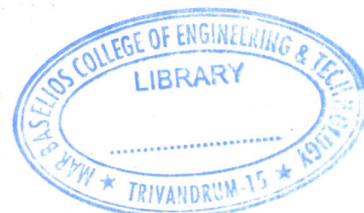
Max. Marks : 100

- Instructions :** i) Answer **all** questions from Part – A.  
ii) Answer **one** question **each** from Module – I, II and III of Part – B.

**PART – A**

1. What is meant by insitu metallography ?
2. What are the advantages of liquid penetrant testing ?
3. What are the advantages of hollographic methods ?
4. Write short notes on radiation safety.
5. What is the basic principles of ultrasonic testing ?
6. What are the general characteristics of ultrasonic waves ?
7. What are the applications of radiographic methods ?
8. Write short notes on gama rays sources.
9. What are the disadvantages of radiographic methods ?
10. What are the advantages of magnetic methods ?

(4×10=40 Marks)



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**PART – B**

**Module – I**

11. Explain the principles and process of penetrant flaw detection.

OR

12. What are the different tools and equipments used in visual methods ? Explain each in detail.

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**Module – II**

13. a) Explain the sources and characteristics of X-rays.

b) Explain the production of X-rays.

OR

14. a) What are the different methods of generating ultrasonic waves ?

b) What are the application of ultrasonic testing ?

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**Module – III**

15. Explain the different types of acoustic emission testing methods.

OR

16. Explain Eddy current method in detail.

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