Assignment - 1

Q1: Write the difference between destructive and non-destructive testing.

Q2: Discuss scope and advantages of N.D.T

Q3: Enlist in detail about N.D.T methods used.

Q4: Discuss any six defects inspected by N.D.T

Q5: What do you mean by visual inspection and what are its types?

Q6: Differentiate between manual inspection & automated inspection.

Q7: Explain the procedure for Ringing Test. Also write its applications.

Q8: Explain chalk Test in detail and write its areas of application.

Q9: Enlist the advantages and limitations of visual inspection.

Q10: Enlist the various equipments involved in visual inspection. Explain the working of Boroscope with diagram.

Assignment - 2

Q1: Explain Dye Penetrant Test with diagram

Q2: What are the different types of developers used in dye penetrant test? Explain.

Q3: Explain the different types of penetrants used in penetrant test.

Q4: Explain Zyglo test with diagram. Also write its applications.

Q5: Explain Leak Test with its areas of application.

Q6: Explain the working principle of magnetic particle testing with neat sketch. Also mention its scope.

7: Discuss in brief about skin effect.

8: Enlist some equipments used in magnetic particle inspection

9: Discuss A.C and D.C magnetisation.

10: Discuss various techniques employed in magnetic particle inspection.

* Assignment * Unit → 3

Q.1) What are the three types of penetrating radiation being used for industrial radiography? Discuss the interpretation of the radiographs.

Q.2) Explain with schematic sketch the gamma ray radiography testing system.

Q.3) Write a short notes on:
(i) Radioactive materials
(ii) Precautions against radiation hazard.

Q.4) Write a short notes on:
(i) Source of radioactive materials.
(ii) X-ray radiography

Q.5) Explain the working principle of Radiography testing. With neat sketch explain the generation of x-ray.

Q.6) How image quality is controlled in radiographic inspect Write a brief note on use of image quality indicator for th

Q.7) Write a short notes about inspection of defect in weld using:
i) Fluorescent liquid penetration test.
ii) Radiography.

Q.8) Explain the properties of x-rays & Gamma rays

Q.9) Explain various inspection techniques used in ~~radiography~~ radiographic method.

Q.10) Explain the following term related with radiographic in
(i) Radiographic Definition
(ii) Secondary radiation.

Assignment 4

Q1) Write a short note on
a) Attenuation
b) Signal to noise ratio
c) Snells law
d) Wave interference.

Q.2) Describe the acoustic procedures for detection of material defects.

Q.3) Write a short note on ultrasonic probes.

Q4) Explain different kinds of sound waves used in ultrasonic inspection. With a neat sketch explain working of a piezoelectric transducer.

Q.5) Briefly discuss the following about ultrasonic inspection.
(i) Immersion Testing
(ii) Characteristic of ultrasonic beam

Q.6) Briefly discuss the following:
(i) Advantage & disadvantage of ultrasonic inspection
(ii) Angle beam pulse echo testing.

Q.7) Briefly describe the transducers used in UI testing. What is the purpose of couplants & how they are used in inspection process?

Q.8) Discuss the advantage, Limitation & Applications of CRO.