

**THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY**

**[AHS 0922]**

**SEPTEMBER 2022**

**Sub. Code: 1414**

**(FEBRUARY 2022 & AUGUST 2022 EXAM SESSIONS)**

**DIPLOMA IN RADIOLOGY IMAGING TECHNOLOGY**

**SECOND YEAR – (Regulation from 2010-2011)**

**PAPER IV – QUALITY CONTROL IN RADIOLOGY AND RADIATION SAFETY**

***Q.P. Code: 841414***

**Time: Three Hours**

**Answer ALL Questions**

**Maximum: 100 Marks**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. Explain about Biological effects of radiation.
2. Describe in detail about NABH guideline on radiation facility.
3. Describe about Personal monitoring devices and their working principles.

**II. Write notes on:**

**(10 x 5 = 50)**

1. Explain in detail about the equivalent dose.
2. What are the various radiation safety instruments commonly used?
3. Explain two Quality Assurance test of Fluoroscopy.
4. Explain the role of shielding in radiation control.
5. Explain Inverse square law with diagram.
6. Explain the working principle of Ionization chamber.
7. Responsibility of Radiation Safety Officer.
8. Central beam alignment test for radiography unit.
9. Natural sources of Radiation.
10. Genetic effect of Radiation.

**III. Short answers on:**

**(10 x 2 = 20)**

1. What is Roentgen?
2. What is AERB?
3. Advantages of Pocket dosimeter.
4. Half Value Layer.
5. What is Half life of Radioactive materials?
6. What are all the Placards to be displayed in radiation premises?
7. What is use factor?
8. What is area monitoring?
9. Define ALARA and its importance.
10. What is the Maximum permissible dose for fetus?

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