

**VINAYAKA MISSION'S RESEARCH FOUNDATIONS, SALEM
(Deemed to be University)**

**DIPLOMA IN RADIOLOGY AND IMAGING TECHNOLOGY
EXAMINATION – September 2021
First Year**

**GENERAL PHYSICS RADIATION PHYSICS AND PHYSICS OF
DIAGNOSTIC RADIOLOGY**

Time: Three hours

Maximum: 75 marks

I. Write an essay on any ONE of the following: (1 x 20 = 20)

1. Draw a diagram and explain the production of X-rays.
2. Explain in detail the biological effects of X-ray radiation.

II. Write short notes on any TWO of the following: (2 x 10 = 20)

3. Bremsstrahlung Radiation
4. Pocket dosimeter
5. Compton scattering
6. Autotransformer, types and transformer losses.

III. Write short answers on any SEVEN of the following: (7 x 5 = 35)

7. Line focus principle and Heel effect.
8. Grid and types of grids.
9. Thermo-luminescent Dosimeter.
10. Radioactive decay
11. Force and work
12. Inverse square law
13. Ionization
14. Heel effect
15. Characteristic radiation.
16. Uses of transformer.