

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

[AHS 1122]

NOVEMBER 2022

Sub. Code: 1842

**B.Sc. RADIOGRAPHY & IMAGING TECHNOLOGY
FIRST YEAR (Regulation 2018-2019)
PAPER II – GENERAL PHYSICS, RADIATION PHYSICS & PHYSICS OF
DIAGNOSTIC RADIOLOGY
Q.P. Code: 801842**

Time: Three Hours

Maximum : 100 Marks

Answer All questions

I. Elaborate on : **(3X10=30)**

1. Explain about the working of Modern X-ray tube with a neat diagram.
2. Explain about the working and various types of transformers.
3. Write down the properties of α , β and γ rays.

II. Write Notes on : **(8X5=40)**

1. Photoelectric effect.
2. Capacitor and Capacitance.
3. Photoelectric absorption.
4. Factors affecting the quality of X-rays.
5. Filtration.
6. Types of grids.
7. Mass defect and Binding energy.
8. Intensifying screen.

III. Short Answers on: **(10X3=30)**

1. S.I unit of electric current and force.
2. Space charge effect.
3. Half life of any two isotopes used in Medicine.
4. Lenz's law.
5. Define Power and its unit.
6. Nuclear Fission.
7. Mass attenuation coefficient.
8. Specific activity.
9. Rare earth screen.
10. Define Curie.
