

[LK 0217]

FEBRUARY 2017

Sub. Code: 1402

**DIPLOMA IN RADIOLOGY IMAGING TECHNOLOGY
FIRST YEAR
PAPER II – GENERAL PHYSICS, RADIATION PHYSICS AND
PHYSICS OF DIAGNOSTIC RADIOLOGY**

Q.P. Code: 841402

Time : Three Hours

Maximum : 100 Marks

Answer All questions.

I. Elaborate on:

(3 x 10 = 30)

1. Discuss in detail the working and construction of stationary anode x-ray tube.
2. Discuss about the factors influencing quality and quantity of x-ray beam.
3. Discuss in detail the interaction of x-rays with matter.

II. Write notes on:

(10 x 5 = 50)

1. Properties of x-rays.
2. Tube rating chart.
3. Auto transformer.
4. Characteristic radiation.
5. Mutual induction.
6. Personnel monitoring device.
7. Heat dissipation in X-ray tube.
8. Radiation zone monitor.
9. Atomic structure of Tungsten.
10. Quality of x-rays.

III. Short answers on:

(10 x 2 = 20)

1. Focal spot.
2. Transformer.
3. Mass number.
4. Define work.
5. Thermionic emission.
6. Electron.
7. Binding energy.
8. Space charge effect.
9. TLD.
10. Ionisation chamber.
