

## Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Imaging Technology Degree Examination – SEP-2017

Time: 3 Hours

Max. Marks: 40 Marks

### Physics of Radiology

**Q.P. Code: 1353**

Your answers should be specific to the questions asked.

Draw neat, labeled diagrams wherever necessary

**(Note: Both QP Codes 1353 and 1354 are to be answered within total duration of 3 hours)**

#### LONG ESSAYS (Answer any One)

**1 x 10 = 10 Marks**

1. Explain in detail the type's transformers and write a note on construction and working of HT transformers with a neat diagram.
2. Explain the various modes of x-ray productions.

#### SHORT ESSAYS (Answer any Three)

**3 x 5 = 15 Marks**

3. Principles of semiconductors
4. Describe dose equivalent and effective dose equivalent.
5. X-ray emission spectrum
6. Define diode and explain half wave rectification.

#### SHORT ANSWERS (Answer any Five)

**5 x 3 = 15 Marks**

7. Define karma and fluence rate.
8. Anode heel effect
9. Eddy current
10. Define mass attenuation coefficient.
11. Define Decay and Half-life with the units.
12. Mass number

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