Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Imaging Technology Degree Examination – AUG/SEP 2016

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. a) Write in detail the principle of semiconductor.
   b) How a p-n junction diodes works and explain about its construction.
2. Briefly describe the conductivity of electricity through gases.

SHORT ESSAYS (Answer any Three) **3 x 5 = 15 Marks**

3. Describe the uses of radioactive nuclides in medicine.
4. Define Capacitance and capacitor.
5. Describe Ionization and Excitation.
6. Describe the copper loss and iron losses in an AC transformer.

SHORT ANSWERS (Answer any Five) **5 x 3 = 15 Marks**

7. Define Inverse square law with a neat diagram.
8. Define Kerma and Exposure.
9. Describe the Electromagnetic spectrum.
10. Define the electric potential and potential difference.
11. What is Radioactive disintegration law?
12. What is thermionic emission and describe 'electron cloud'?

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