

## Rajiv Gandhi University of Health Sciences, Karnataka

III year B.Sc. Imaging Technology Examination – MARCH 2018

Time: Three Hours

Max. Marks: 60 Marks

### DIAGNOSTIC IMAGING TECHNIQUE (RS – II)

**Q.P. CODE: 2911**

Your answers should be specific to the questions asked

Draw neat, labeled diagrams wherever necessary

#### LONG ESSAYS (Answer any Two)

**2 x 10 = 20 Marks**

1. Write a note on Ultrasonographic imaging – modes, physics, transducers, artefacts, contrast and safety considerations.
2. CT imaging of lung – patient positioning, indications, CECT and pulmonary angiography and image reconstruction techniques.
3. Enumerate the principle of MRI.

#### SHORT ESSAYS (Answer any Five)

**5 x 5 = 25 Marks**

4. Multiple detector CT
5. Radioactivity
6. Construction of  $^{99m}\text{Tc}$  generator
7. Side lobe and grating lobe artifacts
8. Paramagnetic substances
9. Detector pitch and collimator pitch
10. Types of magnets used in MRI

#### SHORT ANSWERS (Answer any Five)

**5 x 3 = 15 Marks**

11. Cold kit
12. Radiofrequency coil and gradient coil
13. Contrast to noise ratio and signal to noise ratio
14. Gyromagnetic ratio
15. Ct contrast agents
16. Pixel and Voxel
17. Window width and window level

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