### SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH

(A DEEMED TO BE UNIVERSITY)

# **B.Sc. Allied Health Sciences Third Year (Semester-V)**

July/August -2019 Examination B.Sc. Imaging Technology (IMT)

Time: 2.30 Hrs. [Max. Marks: 80]

### Paper - II

## Radiographic Techniques

Q.P Code: AHS-112

Your answers should be specific to the questions asked. Draw neat labelled diagrams wherever necessary.

 $\underline{LONG ESSAY}$  2 X 10 = 20 Marks

- 1. How do you prepare a patient for barium meal follow through? Describe the procedure of barium meal follow through with various techniques.
- 2. What is CT angiography? What are the precautions taken for the procedure? Mention about the contrast materials used in angiography.

### **SHORT ESSAY** (Answer any Six)

 $6 \times 5 = 30 \text{ Marks}$ 

- 3. Describe the technique of pulmonary angiography.
- 4. Principles of spiral CT
- 5. Barium swallow
- 6. Hysterosalpingography.
- 7. Hypotonic Duodenography.
- 8. Adverse reaction to contrast materials. How do you manage initially?
- 9. Barium enema.
- 10. Fistulogram.

#### SHORT ANSWERS (Answer any Ten)

10 X 3 = 30 Marks

- 11. Ten day rule.
- 12. Principle of MRI
- 13. What are contraindications for MRI examination?
- 14. Radiopharmaceuticals.
- 15. What are the emergency equipments necessary in radiologic procedure room?
- Positive contrast media.
- 17. Non ionic contrast media.
- 18. MRI contrast media.
- 19. Percutaneous catheterization...
- 20. Double contrast procedures.
- 21. Barium meal
- 22. RGU

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Time: 2.30 Hrs. [Max. Marks: 80]

### Paper – I

## **Diagnostic Imaging Techniques**

**Q.P Code: AHS-119** 

Your answers should be specific to the questions asked. Draw neat labelled diagrams wherever necessary.

 $\underline{LONG ESSAY}$  2 X 10 = 20 Marks

- 1. What are the principles of computed tomography? Mention briefly about the various generations OT CT scanners?
- 2. Describe the physical principles of medical ultrasound.

### **SHORT ESSAY** (Answer any Six)

6 X 5 = 30 Marks

- 3. Ultrasound Artefacts.
- 4. Multihole collimator
- 5. Isotopes
- 6. What are hounsfield units? Write briefly
- 7. Pixel and Voxels.
- 8. Gamma camera
- 9.  $T_1$  and  $T_2$  weighted images.
- 10. PACS

#### **SHORT ANSWERS** (Answer any Ten)

10 X 3 = 30 Marks

- 11. MR contrast agents.
- 12. Image reconstruction INCT
- 13. Precautions of handling radiopharmaceuticals.
- 14. Gradient coils.
- 15. Ring artifacts.
- 16. Tube rating.
- 17. Gauss and Tesla
- 18. Duplex scanning
- 19. Interventional radiology
- 20. Grey scale imaging
- 21. Spiral CT
- 22. MRA (Magnetic Resonance Angiography)