

**SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH**  
**(A DEEMED TO BE UNIVERSITY)**



**B.Sc. Allied Health Sciences Third Year Semester-VI**

**September 2025 Examination**

**B.Sc. Imaging Technology**

**Time: 2Hrs 30 mins**

**Paper-I**

**[Max. Marks: 80]**

**MRI Physics and Instrumentation**

**Q.P Code: K6420**

*Your answers should be specific to the questions asked.*

*Draw neat labeled diagrams wherever necessary.*

**LONG ESSAY**

**2 X 10 = 20 Marks**

1. Explain in about MR Safety.
2. Explain in detail about intrinsic and extrinsic parameters of MRI.

**SHORT ESSAY**

**6 X 5 = 30 Marks**

3. Write in Detail about scan time in MRI.
4. Explain in Detail about the history and precessional frequency of MRI.
5. Write in detail about T1 relaxation time in MRI.
6. Write in Detail about Shielding in MRI.
7. Write in detail MRI artifacts.
8. Write in Detail T2 Decay in MRI.

**SHORT ANSWERS**

**10 X 3 = 30 Marks**

9. Write a note on Fringe field
10. Write a note on TR.
11. Write a note on Resolution.
12. Write a note on patient preparation on MRI.
13. Write a note on CNR.
14. Write a note on contrast media.
15. List the application of pressure injector.
16. List the indications of MRI Brain.
17. Draw a labeled Diagram of Circle of Willis.
18. Write a note on advantage and disadvantages of MRI.

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**[Max. Marks: 80]**

**Sub: MRI Imaging basics and advances in MRI**

**Paper-II Q.P Code: K6430**

*Your answers should be specific to the questions asked.*

*Draw neat labeled diagrams wherever necessary.*

**LONG ESSAY**

**2 X 10 = 20 Marks**

1. Explain detail about MR Spectroscopy.
2. Explain detail about MRI Brain.

**SHORT ESSAY**

**6 X 5 = 30 Marks**

3. Write a note on indication, contraindication & Sequences for dorsal spine.
4. Write a note on routes of administration of Contrast media.
5. Write a note on MR Lumbar spine.
6. Write a note on MR Perfusion.
7. Write a note on DTI.
8. Draw a neat diagram of circle of Willis and explain in detail.

**SHORT ANSWERS**

**10 X 3 = 30 Marks**

9. List the pathologies of brain.
10. Write a note Quenching.
11. List the Indications of Lumbar spine.
12. Write a note on DWI & its application
13. Write a note on stroke.
14. Write a note on Meningitis.
15. Write a note on adverse reaction of Contrast media.
16. Write a note on Ramping in MRI
17. Write a note on after care of patient in MRI
18. Write a note on types of Brain Tumor.

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**Paper-III**

**[Max. Marks: 80]**

**Interventional radiological procedures**

**Q.P Code: K6440**

*Your answers should be specific to the questions asked.*

*Draw neat labeled diagrams wherever necessary.*

**LONG ESSAY**

**2 X 10 = 20 Marks**

1. Explain in detail about Thoracic Aortography.
2. Explain in detail Peripheral angiography

**SHORT ESSAY**

**6 X 5 = 30 Marks**

3. Write a note on RGU.
4. Write a note on Guide wires.
5. Write a note on Indication, Contraindication and preparation in Four vessel angiography.
6. Write a note on Pressure injector.
7. Write a note on care and maintain of Operation theater machine.
8. Write a note on Percutaneous nephrostomy.

**SHORT ANSWERS**

**10 X 3 = 30 Marks**

9. List the indications for brain angiography and explain it.
10. Write a note on pre patient care in interventional Radiology
11. Write about X-ray tube.
12. Write about Filters.
13. Write about Thyroid shield.
14. Write about anatomy of Circle of wills.
15. Write about Post patient care in Percutaneous Nephrolithotomy
16. Write about Pre and post care about Cholecystography.
17. Write about Arteriovenous malformation
18. Write about Contrast Media

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