

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0122]

**JANUARY 2022
(OCTOBER 2021 EXAM SESSION)**

Sub. Code: 2515

**M.Sc. RADIOGRAPHY AND IMAGING TECHNOLOGY
SECOND YEAR (From 2019-2020 onwards)
PAPER V – NEWER DEVELOPMENTS IN ADVANCED IMAGING
TECHNOLOGY
*Q.P. Code : 282515***

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Enumerate the various gradient echo sequences. Describe in brief the principles and their clinical applications.
2. Mention the recent advancements and innovation in dual source CT technology and elaborate on them.

II. Write notes on:

(10 x 6 = 60)

1. Breast Tomosynthesis.
2. Dry view Laser Camera.
3. Artefact reduction techniques in MDCT.
4. Volume Ultrasound.
5. Diffusion Weighted Imaging.
6. Ultrasound Elastography.
7. Digital Fluoroscopy.
8. Contrast enhanced USG.
9. HIFU.
10. Silent MRI.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 1022]

OCTOBER 2022

Sub. Code: 2515

**M.Sc. RADIOGRAPHY AND IMAGING TECHNOLOGY
SECOND YEAR (From 2019-2020 & 2020-2021 onwards)
PAPER V – NEWER DEVELOPMENTS IN ADVANCED IMAGING
TECHNOLOGY**

Q.P. Code : 282515

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Computed Radiography and Digital Radiography.
2. Principles, present status and future of PET MR Imaging.

II. Write notes on:

(10 x 6 = 60)

1. Virtual Colonoscopy.
2. MR Spectroscopy.
3. Intravascular Ultrasound.
4. MR sequences in Cardiac imaging.
5. Functional MRI.
6. Ultrasound contrast agents.
7. Silent MRI.
8. HIFU.
9. Contrast enhanced USG.
10. Digital Fluoroscopy.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 1023]

OCTOBER 2023

Sub. Code: 2515

**M.Sc. RADIOGRAPHY AND IMAGING TECHNOLOGY
SECOND YEAR (From 2020-2021 onwards)
PAPER V – NEWER DEVELOPMENTS IN ADVANCED IMAGING
TECHNOLOGY**

Q.P. Code: 282515

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Describe techniques of MRCP. What are the advantages and disadvantages of MRCP vs ERCP?
2. Picture Archiving and communication system.

II. Write notes on:

(10 x 6 = 60)

1. CT Artifacts.
2. Advantages of 3T MRI over 1.5T MRI.
3. Dose reduction techniques in MDCT.
4. Principles of Digital Radiography.
5. Pressure Injector.
6. High intensity focused ultrasound.
7. HIFU.
8. Contrast enhanced USG.
9. Silent MRI.
10. Digital Fluoroscopy.
