

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

[AHS 0321]

MARCH 2021

Sub. Code: 2505

(OCTOBER 2020 EXAM SESSION)

M.Sc. RADIOGRAPHY AND IMAGING TECHNOLOGY

FIRST YEAR (From 2019-2020 onwards)

PAPER V – MODERN RADIOLOGICAL AND IMAGING EQUIPMENT

Q.P. Code : 282505

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate notes on:

(2 x 20 = 40)

1. Discuss principle, equipment, procedure and recent advances in gamma camera & spect imaging.
2. a) Discuss various non-contrast angiography.
b) Discuss in detail about various types of MRI PERFUSION sequences, techniques and application.

II. Write Short Notes on:

(10x6 = 60)

1. MRI Artifacts and remedies.
2. Explain MPR, MIP and MINIP.
3. Patient preparation and procedure and post processing techniques in pulmonary angiogram.
4. Types of modern X ray tubes.
5. MR spectroscopy principle.
6. CT Cisternogram.
7. Contrast Media.
8. Techniques of Ultrasound Elastography and its applications.
9. Technetium generator.
10. Ultrasound artifacts.

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

[AHS 0222]

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

Sub. Code: 2505

**M.Sc. RADIOGRAPHY AND IMAGING TECHNOLOGY
FIRST YEAR**

(Candidates admitted from 2019-2020 onwards – Paper V)

(Candidates admitted from 2020-2021 onwards – Paper VI)

PAPER V & VI – MODERN RADIOLOGICAL AND IMAGING EQUIPMENT

Q.P. Code : 282505

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate notes on:

(2 x 20 = 40)

1. Discuss principle, equipment, procedure and recent advances in PET imaging.
2. Discuss in detail about MRCP principle, technique, sequences and clinical uses.

II. Write Short Notes on:

(10x6 = 60)

1. CT contrast reactions and its management.
2. Basic principle of MRI.
3. Patient preparation and procedure and post processing techniques in cerebral angiogram.
4. Principle and technique of dual energy CT.
5. HIFU – Principles and clinical uses.
6. DEXA Scan.
7. Digital Radiography.
8. Doppler.
9. Piezo electric effect.
10. MR Spectroscopy.

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

[AHS 0522]

MAY 2022

Sub. Code: 2505

**M.Sc. RADIOGRAPHY AND IMAGING TECHNOLOGY
FIRST YEAR**

(Candidates admitted from 2019-2020 onwards – Paper V)

(Candidates admitted from 2020-2021 onwards – Paper VI)

PAPER V & VI – MODERN RADIOLOGICAL AND IMAGING EQUIPMENT

Q.P. Code : 282505

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate notes on:

(2 x 20 = 40)

1. Discuss in detail about MRCP principle, technique, sequences and clinical uses.
2. Discuss principle, equipment and recent advances in Ultrasound.

II. Write Short Notes on:

(10x6 = 60)

1. Virtual bronchoscopy & colonoscopy.
2. Discuss about PACS.
3. Patient preparation and procedure and post processing techniques in peripheral angiogram.
4. DSA-equipment, principle and applications.
5. MRI pulse sequences.
6. Tomosynthesis – technique.
7. Contrast agents used in MRI.
8. CT artifacts.
9. Write about IITV and recent advance.
10. CT interventional procedures.
