

[LP 1019]

OCTOBER 2019

Sub. Code: 1815

**M.Sc. RADIOLOGY AND IMAGING TECHNOLOGY EXAMS
SECOND YEAR
PAPER V – NEWER DEVELOPMENTS IN ADVANCED IMAGING
TECHNOLOGY AND BIOSTATISTICS**

Q.P. Code : 281815

Time: Three hours

Maximum : 100 Marks

I. Elaborate on: **(2 x 20 = 40)**

1. Mention the recent advances & innovations in the MRI Technology and elaborate on them.
2. Write elaborately on the newer developments in digital mammography.

II. Write notes on: **(10 x 6 = 60)**

1. Teleradiology.
2. PET-MRI.
3. Digital mammography.
4. Sequences for reduction in metallic artefacts.
5. Use of ultrasound contrast in drug delivery.
6. Flexible coils in MRI.
7. Multivariate analysis.
8. Correlation and regression analysis.
9. Normal distribution and skewed distribution.
10. Measures of variability.

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

[AHS 0321]

MARCH 2021

Sub. Code: 1815

(OCTOBER 2020 EXAM SESSION)

M.Sc. RADIOLOGY AND IMAGING TECHNOLOGY

SECOND YEAR (From 2017-2018 onwards)

**PAPER V – NEWER DEVELOPMENTS IN ADVANCED IMAGING
TECHNOLOGY AND BIOSTATISTICS**

Q.P. Code : 281815

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate notes on:

(2 x 20 = 40)

1. Technical challenges and recent advances in PET – MRI.
2. Principles of Digital Mammography with special emphasis on types of detector and breast tomosynthesis

II. Write Short Notes on:

(10x6 = 60)

1. K- Space
2. Factors affecting breast dose in mammography.
3. Image quality in fluoroscopy.
4. CT reconstruction.
5. Contrast ultrasonography.
6. Ultrasound acoustic power and bio effects.
7. Briefly describe the different types of analysis of data, pointing out the significance of each.
8. Mention the important features of research design.
9. Briefly explain about sampling error and its significance.
10. Explain about small sample and large sample.

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[AHS 0921]

**SEPTEMBER 2021
(MAY 2021 EXAM SESSION)**

Sub. Code: 1815

**M.Sc. RADIOLOGY AND IMAGING TECHNOLOGY
SECOND YEAR (From 2017-2018 onwards)
PAPER V – NEWER DEVELOPMENTS IN ADVANCED IMAGING
TECHNOLOGY AND BIOSTATISTICS
*Q.P. Code : 281815***

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate notes on: (2 x 20 = 40)

1. Mention the recent advancements and innovation in dual source CT Technology and elaborate on them.
2. Principles, present status and future of PET MR Imaging.

II. Write Short Notes on: (10x6 = 60)

1. Digital PET.
2. Picture Archiving of Communication System (PACS).
3. Dual energy X-Ray units.
4. Elastography – principles.
5. Recent advances in fetal MRI imaging.
6. Digital fluoroscopy.
7. Briefly explain the necessity of defining a research problem and various techniques involved in defining a problem.
8. Literature survey.
9. Explain in detail the different methods of collecting data.
10. The important concepts related to research design.
