

**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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