

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

[LR 1220]

**DECEMBER 2020
(AUGUST 2020 EXAM SESSION)**

Sub. Code: 1837

**BACHELOR IN RADIOLOGY IMAGING TECHNOLOGY
THIRD YEAR – (Regulation from 2014-2015)**

**PAPER II – MODERN IMAGING TECHNIQUES AND RECENT TRENDS IN IMAGING
Q.P. Code: 801837**

Time: Three Hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Write in detail about the patient preparation, acquisition of PET-CT scans. Explain about the pre and post patient care.
2. Write about the MR protocol for the paediatric brain patient and explain about the accessories used to monitor the patient.
3. Write down the protocol to be followed for imaging in mammography and explain in detail about the features of benign and malignant lesions in mammography

II. Write notes on:

(8 x 5 = 40)

1. Back Projection Technique
2. MDCT and its advantages.
3. Collimation in Gamma camera.
4. Discuss about the exposure factors used in serial programming for imaging in angiography.
5. MR guided focused ultrasound.
6. Write any five quality assurance tests to be carried out for CT.
7. Interaction of Ultrasound with tissues and its properties.
8. DSA.

III. Short answers on:

(10 x 3 = 30)

1. In vivo dosimetry
2. Expand PACS and DICOM
3. Piezo electric effect
4. Two common artifacts in MR.
5. Role of imaging in IGRT.
6. Name any three sequences commonly used in MR.
7. List down the clinical applications of ultrasound.
8. Role of radiographer in angiographic techniques.
9. GFR.
10. Contamination monitor.
