

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

[AHS 0222]

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

**Sub. Code: 2502**

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

**(Candidates admitted from 2019-2020 onwards – Paper II)**

**(Candidates admitted from 2020-2021 onwards – Paper III)**

**PAPER II & III – CONVENTIONAL RADIOLOGICAL AND IMAGING  
EQUIPMENT**

*Q.P. Code : 282502*

**Time: Three hours**

**Answer ALL Questions**

**Maximum: 100 Marks**

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

1. Factors influencing Quality and intensity of X –rays.
2. Mammography unit.

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

1. Space charge effect.
2. Focal spot size measurement.
3. Constant potential generator.
4. Anode heel effect.
5. Half value layer.
6. Kilovoltage circuit.
7. Anode rating chart.
8. Advantages of Image intensifier tube over fluoroscopic device.
9. Dental X-ray unit.
10. Various types of grid movements.

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

**[AHS 1022]**

**OCTOBER 2022**

**Sub. Code: 2502**

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

**(Candidates admitted from 2019-2020 onwards – Paper - II)**

**(Candidates admitted from 2020-2021 onwards – Paper - III)**

**PAPER II & III - CONVENTIONAL RADIOLOGICAL AND  
IMAGING EQUIPMENT**

*Q.P. Code : 282502*

**Time: Three hours**

**Maximum : 100 Marks**

**Answer ALL Questions**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. Different types of Beam Limiting devices and its advantages and Grids, its types and advantages.
2. Construction and working principle of X-ray tubes.

**II. Write notes on:**

**(10 x 6 = 60)**

1. Focal Spot and Focal Track.
2. Filters and its uses.
3. Relays in X-ray equipment.
4. Conventional Fluoroscopic screen.
5. Dental X-ray Unit.
6. Spin Top Test.
7. Potter-Bucky Diaphragm.
8. Automatic exposure control.
9. Vidicon Camera.
10. X-ray Tube housing.

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

**[AHS 1023]**

**OCTOBER 2023**

**Sub. Code: 2502**

**M.Sc. RADIOGRAPHY AND IMAGING TECHNOLOGY  
FIRST YEAR (From 2020-2021 onwards)  
PAPER III - CONVENTIONAL RADIOLOGICAL AND  
IMAGING EQUIPMENT**

***Q.P. Code: 282502***

**Time: Three hours**

**Maximum: 100 Marks**

**Answer ALL Questions**

**I. Elaborate on:**

**(2 x 20 = 40)**

1. Functional tests for X-ray Tube: a) Timer b) Focal Spot & c) Beam alignment test.
2. Design and function of mammographic X-ray unit.

**II. Write notes on:**

**(10 x 6 = 60)**

1. Beam limiting devices.
2. Line Focal Principle.
3. X-ray Skull Unit.
4. Three Phase Full wave rectifier circuit.
5. Anode Heat effect.
6. Grids: Grid Ratio, Types and advantages.
7. Image Intensifier tube.
8. Rotating anode X-ray Tube.
9. Constant potential generator.
10. Inherent and added filters.

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