

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

[AHS 0922]

**SEPTEMBER 2022**

**Sub. Code: 1423**

**(FEBRUARY 2022 & AUGUST 2022 EXAM SESSIONS)**

**DIPLOMA IN RADIOGRAPHY AND IMAGING TECHNOLOGY**

**FIRST YEAR (Regulation from 2018-2019)**

**PAPER III – X-RAY MACHINES ACCESSORIES & MAINTENANCE**

*Q. P. Code: 841423*

**Time: Three hours**

**Maximum : 100 Marks**

**Answer ALL Questions**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. What are the factors influencing the quality and intensity of X-rays?
2. How X-rays are produced? With a suitable diagram describe the stationary anode tube.
3. What is transformer? Explain in detail step-up, step down and auto transformer.

**II. Write notes on:**

**(10 x 5 = 50)**

1. Characteristic X-rays.
2. Mammography.
3. X-ray tube cooling.
4. Photo electric effect.
5. Full wave rectifier.
6. Tube Current.
7. Write notes on Heel effect.
8. Kilovoltage circuit.
9. Crooke's tube.
10. Electronic timer.

**III. Short answers on:**

**(10 x 2 = 20)**

1. Triode.
2. Thermionic emission.
3. Filters.
4. Vacuum tube diode.
5. Aperture diaphragms.
6. Grid.
7. Focal spot.
8. Atomic Number.
9. Filament.
10. Semiconductor.

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