

[LI 0216]

FEBRUARY 2016

Sub Code: 1803

**B.Sc. RADIOLOGY IMAGING TECHNOLOGY  
FIRST YEAR**

**PAPER III – RADIO DIAGNOSIS EQUIPMENTS, MAINTENANCE AND  
QUALITY CONTROL**

*Q.P. Code: 801803*

**Time : Three Hours**

**Maximum : 100 Marks**

**Answer All questions.**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. Describe with neat circuit diagram, kV control circuit and explain the function of each part.
2. What is the physics behind mammography and explain the construction of mammographic x-ray tube?
3. Describe how ultrasound image is formed and explain various modes of ultrasound imaging.

**II. Write notes on:**

**(8 x 5 = 40)**

1. Half wave rectification.
2. Principle of computed radiography.
3. Digital radiography with CCD detectors.
4. Various generations of CT.
5. Detectors used in CT.
6. Types of magnet used in MRI scan.
7. T1 weighted imaging.
8. Forward Bias and Reverse Bias.

**III. Short answers on:**

**(10 x 3 = 30)**

1. Anode Heel effect.
2. X-ray tube rating.
3. Advantages of digital radiography.
4. Self rectifier.
5. Characteristic x-rays.
6. Piezoelectric effect.
7. CT number.
8. Larmor frequency.
9. Grid.
10. Factors affecting x-ray beam quality.

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