

**B.Sc. IN MEDICAL IMAGING TECHNOLOGY
(BMIT)**

Term-End Examination

December, 2013

**BAHI-51 : PHYSICS OF RADIOLOGICAL
EQUIPMENT - I**

Time : 3 Hours

Maximum Marks : 70

PART - A

Answer *any five* questions.

8x5=40

1. Explain rectifier circuit in the generator of x-ray tube. Explain the working of three phase x-ray generator.
2. Describe mammography machine. Explain the use of various types of anode and filters used in mammography equipment.
3. Explain the construction and working of the conventional image intensifier in x-ray machine.
4. Explain about the different generations of Computed Tomography (CT).
5. Write about the design and principle and operation of Single Photon Emission Computed Tomography.

6. Explain about Laser camera and Dry Processing in radiology.
7. Why is Tungsten the preferred material for x-ray anode ? What are the differences between conventional x-ray radiography tube and fluoroscopy x-ray tube ?
8. What is Grid ? Define Grid Ratio. Write all advantages and disadvantages of the grid.

PART - B

9. Write short notes on *any five* : 6x5=30
 - (a) Timer in x-ray tube
 - (b) Dual focus x-ray tube
 - (c) Line focus principle in x-ray tube
 - (d) Contrast, Noise and Resolution in x-ray imaging
 - (e) x-ray exposure rating chart
 - (f) PACS
 - (g) Digital subtraction Angiography
 - (h) Scatter Radiation
-