

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

Term-End Examination

December, 2016

00323

**BAHI-051 : PHYSICS OF RADIOLOGICAL
EQUIPMENT-I**

Time : 3 hours

Maximum Marks : 70

Note : Attempt any six questions. Question no. 9 is compulsory.

1. Describe in detail about Interlocking Circuits.
Write about Relays and Safety interlocks. 4+4=8

2. Draw a neat diagram of X-ray tube and describe
in detail about its function. 4+4=8

3. Write a detailed note of SPECT camera and
discuss about its construction and function. 4+4=8

4. What is Mammography ? Describe about
Mammography device and write the differences
between X-ray tube and Mammography tube. 2+3+3=8

5. What is a Bridge Rectifier ? Write in detail about
the X-ray generator circuit using it. 3+5=8

6. Explain the construction and function of a grid.
What is Grid Ratio ? What are the advantages
and disadvantages of a grid ? $4+1+3=8$
7. Write in detail about H.T. generator for X-ray
machine. How does it work in high tension
circuits ? $4+4=8$
8. Describe portable X-ray units and their
advantages and disadvantages. $4+4=8$
9. Write short notes on any *five* of the following : $5 \times 6 = 30$
- (a) Grid Ratio
 - (b) Image Intensifier
 - (c) Dental X-Ray Machine
 - (d) Image Noise and Resolution
 - (e) PACS
 - (f) Timers
 - (g) Tomography
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