

00913

**B.Sc. IN MEDICAL IMAGING  
TECHNOLOGY**

**Term-End Examination**

**June, 2012**

**BAHI-031 : BASICS OF RADIOLOGICAL  
PHYSICS**

*Time : 3 hours*

*Maximum Marks : 70*

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**PART - A**

Answer any five questions. Each question carries  
8 marks. 5x8=40

1. Explain the various measures taken for radiation protection of patient in radiography room.
2. What is rectification ? Compare various types of rectifications used in X-ray machines.
3. What are filters ? List the types of filters and explain their use in diagnostic radiology.
4. Draw the diagram of rotating anode X-ray tube and label the parts. What are the advantages when is compared to stationary anode X-ray tube ?

5. Explain what is Thermionic emission . How Thermionic emission is used in production of X-rays ?
6. Explain the production of X-Rays and dissipation of heat in X-Ray tubes.
7. Explain in detail how X-Rays interact with matter.
8. Explain how Grids are functioning to reduce scattered radiation ?

**PART - B**

9. Write short notes on **any five** of following. Each carries *six* marks. **5x6=30**
- (a) Inverse square law
  - (b) Transformers and their types
  - (c) TLD Badge
  - (d) Radiation safety officer
  - (e) AERB
  - (f) Thermionic emission
  - (g) Half life of radioactive materials
  - (h) Tungsten-as an anode material
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