

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

Term-End Examination

June, 2015

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

Time : 3 hours

Maximum Marks : 70

PART - A

Answer any five questions.

8x5=40

1. Explain the construction and function of a rectifier circuit in X-ray tube circuit.
2. Explain the construction and function of Image Intensifier in fluoroscopy.
3. Explain the construction and function of Anode of an X-ray tube ? What is line focus principle ? How heat is dissipated from an X-ray tube ?
4. What is LAN ? Give an example of LAN. Define Transmission Control Protocol.
5. Explain design and principle of operation of Positron Emission Tomography.
6. What is the Average Glandular Dose in mammography ? Write details about the quality assurance tests in mammography.

7. Write the construction and principle of DEXA machine.
8. Write a detailed essay on Grid.

PART - B

9. Write notes on **any five** : **6x5=30**
 - (a) Falling Load Generator
 - (b) Automatic Exposure Control
 - (c) Digital Subtraction Angiography
 - (d) Heat loading of an X-ray tube
 - (e) PACS
 - (f) Quality Control in SPECT
 - (g) Anode of conventional mammography unit
 - (h) Tomography
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