

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

Term-End Examination

December, 2016

BAHI-032 : RADIOGRAPHIC IMAGING

Time : 3 hours

Maximum Marks : 70

Note : *This question paper consists of three parts, A, B and C. Attempt **all** questions from Part A, any **four** questions from Part B and any **three** questions from Part C. All questions from Parts A and C carry 10 marks each and in Part B each question carries 5 marks.*

PART A

1. Fill in the blanks. *10×1=10*
- (a) The characteristic X-ray contains _____ energy.
- (b) The characteristic K-shell X-rays produced in tungsten target has energy _____ keV.
- (c) The X-ray tube current in fluoroscopy is typically _____ mA.

- (d) Rare earth screen in film cassette is made of _____ .
- (e) The spatial resolution of a traditional bare X-ray film is _____ than the film-screen system.
- (f) Optical density is defined as _____ .
- (g) Average gradient of film characteristic curve is the slope between two densities _____ and _____ .
- (h) Fixer of traditional film processor is _____ in nature.
- (i) Direct detection flat panel system contains _____ .
- (j) The traditional screen film mammography has resolution about _____ lines per mm.

2. Write short notes on the following : 5×2=10

- (a) Speed of film
- (b) Use of grid in radiography
- (c) Latent image on film
- (d) X-ray cassette
- (e) Photostimulable phosphor

PART B

Attempt any four questions.

4×5=20

3. Write about inorganic crystalline scintillators used in radiology.
4. Write in brief about CCD cameras.
5. Write a short note on Dry processing.
6. What is screen in traditional film cassettes ?
7. Write a note about the safe light in dark room.

PART C

Attempt any **three** questions.

$3 \times 10 = 30$

8. Write in detail about the construction and function of Indirect Detection Flat Panel system.
9. How is quality assurance of traditional or automatic wet film processor carried out ?
10. Write in detail about the steps involved in wet processing of a traditional Silver Halide film.
11. What is a Grid ? What is Grid Ratio ? How does a Grid work ?

$4 + 3 + 3 = 10$