

00184

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

Term-End Examination

June, 2015

BAHI-032 : RADIOGRAPHIC IMAGING

Time : 3 hours

Maximum Marks : 70

PART - A

1. Fill in the blanks : 10x1=10
- (a) Visible light is a form of _____ radiation.
 - (b) The exposure rate dependency between exposure and OD of the film for every long or very short exposure is called _____.
 - (c) For H and D curve of a traditional film screen system, the steeper slope indicates _____ contrast.
 - (d) The grid ratio generally used in radiography is _____.
 - (e) Differential attenuation is affected by _____.
 - (f) Increase in field size will increase _____ radiation.

- (g) In a traditional film screen system the thicker screen will result in increased _____ of the system.
- (h) For radiography film, latitude refers range of _____ over which the film is radiographically useful.
- (i) The width of the penumbra region depends upon the _____ of the focus.
- (j) The full form of FWHM is _____.

2. Write short notes on the following : 5x2=10

- (a) NaI crystal in Nuclear Medicine
- (b) Range of radiation doses in medical imaging
- (c) Base + Fog in Radiography Film
- (d) Resolution in film screen system
- (e) Benefits of digital imaging over analog imaging
- (f) Radiographic cassette

PART - B

Attempt **any four** questions : 4x5=20

- 3. What is Bremsstrahlung radiation ? How is it different from characteristic radiation ?
- 4. Explain the various methods to reduce patient's radiation dose in medical imaging.
- 5. Explain the image formation in Computed Radiography (CR) system.

6. Explain daily quality insurance programme in traditional film processor system.
7. Compare Rare Earth screen with Calcium Tungstate screen.

PART - C

Attempt **any three** questions : **10x3=30**

8. Explain Digital Radiography (DR) system of imaging. Write its advantages and disadvantages with respect to traditional film screen system.
 9. What is the characteristic curve of a film screen system? Explain it with its use in medical imaging.
 10. Explain the structure and function of a traditional film as image recorder. Kindly explain the chemical reactions involved in development of the film.
 11. Explain in detail the structure and function of screen in a traditional cassette.
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