[LB 0212] **AUGUST 2012** **Sub. Code: 1812**

B.Sc. RADIOLOGY IMAGING TECHNOLOGY /
RADIO DIAGNOSIS TECHNOLOGY

SECOND YEAR

PAPER II – X-RAY FILM/IMAGE PROCESSING TECHNIQUES
(INCLUDING DARK ROOM TECHNIQUES)

Q.P. Code: 801812

Time : Three Hours **Maximum : 100 marks**

Answer ALL questions in the same order.

I. Elaborate on:	**Pages (Max.)**	**Time (Max.)**	**Marks (Max.)**
1. Discuss in detail about double coated X-ray film structure?	7	20 min.	10
2. Explain different steps in manual processing?	7	20 min.	10
3. Define contrast and various factors that affect contrast.	7	20 min.	10
II. Write notes on:			
1. Safe Light.	4	10 min.	5
2. Penumbra.	4	10 min.	5
3. Fluorescence.	4	10 min.	5
4. Rare earth screens.	4	10 min.	5
5. Artifacts in X-ray films.	4	10 min.	5
6. Constructions of automatic film processor.	4	10 min.	5
7. Uses of single coated X-ray film.	4	10 min.	5
8. Types of X-ray Cassettes.	4	10 min.	5
III. Short answers on:			
1. Mammography film.	2	4 min.	3
2. Cassette pass box.	2	4 min.	3
3. Base fog.	2	4 min.	3
4. Processing faults.	2	4 min.	3
5. Tests for light leakage in X-ray cassette.	2	4 min.	3
6. Film storage of unexposed films.	2	4 min.	3
7. Draw a characteristic curve of X-ray emulsion and label.	2	4 min.	3
8. Screen mottle.	2	4 min.	3
9. Luminescence.	2	4 min.	3
10. Laser camera.	2	4 min.	3

****

[LD 0212] **AUGUST 2013** **Sub. Code: 1812**

B.Sc. RADIOLOGY IMAGING TECHNOLOGY /
RADIO DIAGNOSIS TECHNOLOGY

SECOND YEAR

PAPER II – X-RAY FILM/IMAGE PROCESSING TECHNIQUES
(INCLUDING DARK ROOM TECHNIQUES)

Q.P. Code: 801812

Time : Three Hours **Maximum : 100 marks**

Answer ALL questions

I. Elaborate on: **(3 x 10 = 30)**

1. Discuss in detail about double coated X-ray film?
2. Write briefly on the construction of a conventional X-ray cassette?
3. Explain different steps in manual processing?

II. Write notes on: **(8 x 5 = 40)**

1. Rare earth screens.
2. Artifacts in X-ray films.
3. Safe light.
4. Types of intensifying screen.
5. Screen mottle.
6. Care of X-ray cassette.
7. Characteristic curve of X-ray emulsion.
8. How will you test for screen contact?

III. Short Answers on: **(10 x 3 = 30)**

1. Laser camera
2. Cassette pass box.
3. Intensifying factor.
4. Grid cassette.
5. Processing faults.
6. Film storage of unexposed films.
7. Luminescence
8. Test for light leakage in cassette.
9. Latent image.
10. Sodium thiosulphate.

****

[LE 0212] **FEBRUARY 2014** **Sub. Code: 1812**

B.Sc. RADIOLOGY IMAGING TECHNOLOGY /
RADIO DIAGNOSIS TECHNOLOGY

SECOND YEAR

PAPER II – X-RAY FILM/IMAGE PROCESSING TECHNIQUES
(INCLUDING DARK ROOM TECHNIQUES)

Q.P. Code: 801812

Time : Three Hours **Maximum : 100 marks**

Answer ALL questions

I. Elaborate on: **(3 x 10 = 30)**

1. Explain in detail with appropriate diagrams, the construction of Intensifying Screens.
2. Describe various steps and methods of Manual Processing with illustrative diagram.
3. Draw the cross section of Single Sided Emulsion Film and explain.

II. Write notes on: **(8 x 5 = 40)**

1. Non-screen Film.
2. Base of X-Ray Film.
3. Formation of Latent Image.
4. Silver Recovery.
5. Mammography Cassette.
6. Film Artifacts.
7. Rollers in Automatic Processor.
8. Features of Ideal Cassette.

III. Short Answers on: **(10 x 3 = 30)**

1. Function of Gelatin.
2. Safe lights in Dark Room.
3. Wetting Agents.
4. Temperature in Developing.
5. Ingredients of Fixer.
6. Green Sensitive Film.
7. Halation.
8. Legends and Actinic Markings.
9. Different sizes of Screen-Film Cassettes.
10. Various speeds of Intensifying Screens.

****

[LF 0212] **AUGUST 2014** **Sub. Code: 1812**

B.Sc. RADIOLOGY IMAGING TECHNOLOGY /
RADIO DIAGNOSIS TECHNOLOGY

SECOND YEAR

PAPER II – X-RAY FILM/IMAGE PROCESSING TECHNIQUES
(INCLUDING DARK ROOM TECHNIQUES)

Q.P. Code: 801812

Time : Three Hours **Maximum : 100 marks**

Answer ALL questions

I. Elaborate on: **(3 x 10 = 30)**

1. Discuss in detail about automatic film processing
2. Describe the constituents of fixer and developer. Explain the manual film developing.
3. Describe in detail about the characteristic curve.

II. Write notes on: **(8 x 5 = 40)**

1. Intensifying screen.
2. Radiographic film.
3. How to check light leakage in dark room.
4. Film screen contact test.
5. Photographic unsharpness.
6. Dark room.
7. Types of cassettes.
8. Day light printer.

III. Short Answers on: **(10 x 3 = 30)**

1. Film cassette.
2. Fluorescence.
3. Blur.
4. Safe light.
5. Solarisation.
6. Parallax.
7. CR image phosphor.
8. Emulsion.
9. Double sided film.
10. Gradient.

****

[LG 0215] **FEBRUARY 2015** **Sub. Code: 1812**

B.Sc. RADIOLOGY IMAGING TECHNOLOGY /
RADIO DIAGNOSIS TECHNOLOGY

SECOND YEAR

PAPER II – X-RAY FILM/IMAGE PROCESSING TECHNIQUES
(INCLUDING DARK ROOM TECHNIQUES)

Q.P. Code: 801812

Time : Three Hours **Maximum : 100 marks**

Answer ALL questions

I. Elaborate on: **(3 x 10 = 30)**

1. What are the various types of films available?
   Explain in detail about double side coated X-ray film?
2. Define radiographic contrast? Discuss various that affect contrast?
3. What is an intensifying screening?
   Discuss in detail about construction and working of intensifying screen.

II. Write notes on: **(8 x 5 = 40)**

1. Artifacts in X-ray films.
2. Constituents of a developer.
3. Safe light.
4. Screen mottle.
5. Care of X-ray cassette.
6. Fluorescence.
7. Penumbra.
8. Characteristic curve.

III. Short Answers on: **(10 x 3 = 30)**

1. Luminescence.
2. Laser camera.
3. Grid.
4. Curved cassette.
5. Latent image.
6. Processing faults.
7. X-ray phosphors.
8. Flexible cassette.
9. What is pH value?
10. Dichroic fog.

****

[LH 0815] **AUGUST 2015** **Sub. Code: 1812**

B.Sc. RADIOLOGY IMAGING TECHNOLOGY / RADIO DIAGNOSIS TECHNOLOGY

SECOND YEAR

PAPER II – X-RAY FILM/IMAGE PROCESSING TECHNIQUES (INCLUDING DARK ROOM TECHNIQUES)

Q.P. Code: 801812

Time : Three Hours **Maximum : 100 marks**

Answer ALL questions

I. Elaborate on: **(3 x 10 = 30)**

1. Write in detail about the photographic characteristic of X – ray film.
2. Write in detail about the construction of intensifying screen.
3. Write the steps of film processing.

II. Write notes on: **(8 x 5 = 40)**

1. Quantum mottle.
2. Handling of exposed and unexposed films.
3. Single emulsion film.
4. Screen Phosphors.
5. Modulation transfer function.
6. Film density.
7. Penumbra.
8. Developing agents.

III. Short Answers on: **(10 x 3 = 30)**

1. Dark room safe light.
2. Sodium thiosulphate.
3. Replenisher.
4. Gelatin.
5. Fog.
6. Fluorescence.
7. Factors affecting focal spot size.
8. Maintenance of Cassette.
9. Intensification factor.
10. Cleaning of automatic Processor.

****

[LI 0216] FEBRUARY 2016 **Sub Code: 1812**

B.Sc. RADIOLOGY IMAGING TECHNOLOGY / RADIO DIAGNOSIS TECHNOLOGY

SECOND YEAR

PAPER II – X-RAY FILM/IMAGE PROCESSING TECHNIQUES (INCLUDING DARK ROOM TECHNIQUES)

Q.P. Code: 801812

Time : Three Hours **Maximum : 100 Marks**

Answer All questions.

I. Elaborate on : **(3 x 10 = 30)**

1. Define contrast and various factor that affect film contrast.
2. Write in detail about double coated film.
3. Steps of film processing – write in detail.

II. Write Notes on: **(8 x 5 = 40)**

1. Geometric factors affecting quality of radiographic images.
2. Emulsion.
3. Handling of exposed and unexposed films.
4. Film speed.
5. Rare earth screens.
6. Latent image.
7. X – Ray film.
8. Screen phosphors.

III. Short Answers on: **(10 x 3 = 30)**

1. Replenisher.
2. FOG.
3. Luminescence.
4. Types of radiographic mottle.
5. Latitude.
6. Silver recovery.
7. Intensification factor.
8. Sharpness.
9. Cassette handling.
10. Sodium thiosulphate.

******

[LJ 0816] AUGUST 2016 **Sub. Code: 1812**

B.Sc. RADIOLOGY IMAGING TECHNOLOGY/
RADIO DIAGNOSIS TECHNOLOGY
SECOND YEAR
PAPER II – X-RAY FILM/IMAGE PROCESSING TECHNIQUES
(INCLUDING DARK ROOM TECHNIQUES)

Q.P. Code: 801812

Time: Three Hours **Maximum: 100 Marks**

Answer all questions

I. Elaborate on: **(3 x 10 = 30)**

1. Draw the cross section of Single Sided Emulsion Film and explain.
2. Describe various steps and methods of Manual Processing with illustrative diagram.
3. Explain in detail with appropriate diagrams, the construction of Intensifying Screens.

II. Write notes on: **(8 x 5 = 40)**

1. Safe Light.
2. Penumbra.
3. Fluorescence.
4. Rare earth screens.
5. Artifacts in X-ray films.
6. Constructions of automatic film processor.
7. Uses of single coated X-ray film.
8. Types of X-ray Cassettes.

III. Short answers on: **(10 x 3 = 30)**

1. Dark room safe light.
2. Sodium thiosulphate.
3. Replenished.
4. Gelatin.
5. Fog.
6. Grid.
7. Factors affecting focal spot size.
8. Maintenance of Cassette.
9. Intensification factor.
10. Cleaning of automatic Processor.

****

[LK 0217] FEBRUARY 2017 **Sub. Code: 1812**

B.Sc. RADIOLOGY IMAGING TECHNOLOGY/
RADIO DIAGNOSIS TECHNOLOGY
SECOND YEAR
PAPER II – X-RAY FILM/IMAGE PROCESSING TECHNIQUES
(INCLUDING DARK ROOM TECHNIQUES)

Q.P. Code: 801812

Time: Three Hours **Maximum: 100 Marks**

Answer all questions

I. Elaborate on: **(3 x 10 = 30)**

1. Discuss in detail about automatic film processing.
2. Describe in detail about the characteristic curve.
3. Discuss in detail about doubled coated X-ray film structure.

II. Write notes on: **(8 x 5 = 40)**

1. Mammography cassette.
2. Film Artifacts.
3. Film screen contact text.
4. Rare earth screens.
5. Fluorescence.
6. Safe light.
7. Screen mottle.
8. Dark room.

III. Short answers on: **(10 x 3 = 30)**

1. Emulsion.
2. Various speeds of intensifying screens.
3. Temperature in Developing.
4. Luminescence.
5. Latent image.
6. Sodium Thiosulphate.
7. Film storage of unexposed films.
8. Laser Camera.
9. Green sensitive film.
10. Processing faults.

****