

[LB 0212]

AUGUST 2012

Sub. Code: 1903

B.Sc. - RADIOTHERAPY TECHNOLOGY

FIRST YEAR

PAPER – III RADIOGRAPHIC PHOTOGRAPHY

Q.P. Code : 801903

Time : Three hours

Maximum : 100 marks

(180 Mins) Answer ALL questions in the same order.

I. Elaborate on:

Pages Time Marks  
(Max.)(Max.)(Max.)

- |                                                                                             |   |    |    |
|---------------------------------------------------------------------------------------------|---|----|----|
| 1. What is radiography?<br>What are the accessories required for a good radiological image? | 7 | 20 | 10 |
| 2. Describe the structure on an X-ray film.                                                 | 7 | 20 | 10 |
| 3. Discuss the procedure involved in film processing.                                       | 7 | 20 | 10 |

II. Write Notes on:

- |                                                                      |   |    |   |
|----------------------------------------------------------------------|---|----|---|
| 1. What are contrast agents? Explain with example.                   | 4 | 10 | 5 |
| 2. What are the characteristics of an X-ray Film.                    | 4 | 10 | 5 |
| 3. What are the requirements to set up a dark room.                  | 4 | 10 | 5 |
| 4. What are the factors influencing image quality.                   | 4 | 10 | 5 |
| 5. What are beam restrictors / collimator.                           | 4 | 10 | 5 |
| 6. Describe the X-ray tube with diagram.                             | 4 | 10 | 5 |
| 7. What is the influence of temperature and time in film processing. | 4 | 10 | 5 |
| 8. Describe the characteristic curve.                                | 4 | 10 | 5 |

III. Short Answers on:

- |                         |   |   |   |
|-------------------------|---|---|---|
| 1. Automatic Processor. | 2 | 4 | 3 |
| 2. Fluoroscopy.         | 2 | 4 | 3 |
| 3. Image Intensifier.   | 2 | 4 | 3 |
| 4. Dental film.         | 2 | 4 | 3 |
| 5. What is SPR.         | 2 | 4 | 3 |
| 6. Cassette.            | 2 | 4 | 3 |
| 7. Total filtration.    | 2 | 4 | 3 |
| 8. Laser lights.        | 2 | 4 | 3 |
| 9. Moving Grid.         | 2 | 4 | 3 |
| 10. Replinisher.        | 2 | 4 | 3 |

\*\*\*\*\*

Time: Three hours

Maximum : 100 Marks

Answer All questions

**I. Elaborate on:**

**3 x 10 = 30**

1. a. What is grid? What are the types of grid?  
b. Define grid ratio, grid frequency and grid cut off?
2. What are the constituents of manual processing developing solutions? Describe the functions and purpose of each. What is Replinisher? Why is it required?
3. Tabulate the merits and demerits of conventional, computed and digital radiography.

**II. Write notes on**

**8 x 5 = 40**

1. Screen contact test
2. Latent image
3. Factors affecting density and contrast
4. Compare the speed of two different intensifying screens
5. Dark room
6. Cross section of a double coated film
7. Acid stop bath
8. Hangers

**III. Short answers on**

**10 x 3 = 30**

1. Actinic marker
2. Pass box
3. pH value
4. Gelatin
5. Occlusive film
6. Curved cassette
7. Super coat
8. Safe light filters
9. Dichroic fog
10. Restrainer

\*\*\*\*\*

**B.Sc. RADIOTHERAPY TECHNOLOGY**  
**FIRST YEAR**  
**Paper III – RADIOGRAPHIC PHOTOGRAPHY**  
**Q.P. Code: 801903**

**Time: Three hours**

**Maximum : 100 Marks**

**Answer all questions**

**I. Elaborate on:**

**3 x 10 = 30**

1. What are the factors that affect geometric unsharpness? Explain with suitable diagrams
2. Draw the cross section of Intensifying Screen and the label the parts. Explain intensifying factor.
3. Discuss the merits and demerits involved in the manual and Automatic processing

**II. Write notes on:**

**8 x 5 = 40**

1. Computed radiography
2. List the constituents of developer and note the function of each
3. HD curve
4. Methods of Silver recovery
5. Safe light test
6. Grid and types of grid
7. Types of cassettes
8. Actinic marker

**III. Short answers on:**

**10 x 3 = 30**

1. What can be used to check speed of two films?
2. Film density
3. Starter solution
4. Static marks
5. Imaging plate
6. Step wedge
7. Safety base
8. Fixing time
9. Non screen films
10. What color can be given to dark room walls?

\*\*\*\*\*

[LF 0212]

AUGUST 2014

Sub.Code :1903

**B.Sc. RADIOTHERAPY TECHNOLOGY  
FIRST YEAR  
PAPER III – RADIOGRAPHIC PHOTOGRAPHY**

***Q.P. Code: 801903***

**Time: Three hours**

**Maximum : 100 Marks**

**Answer All Questions**

**I. Elaborate on:**

**(3x10=30)**

1. Explain in detail the structure of X-ray film.
2. Discuss in detail washing, washing rate and factors affecting the washing rate.
3. Explain and compare manual and automatic film processing.

**II. Write notes on:**

**(8x5=40)**

1. Explain the methods of cleaning screens.
2. Briefly explain any two types of intensifying screens.
3. Explain Latent image formation.
4. What is law of reciprocity?
5. What are the advantages of two emulsion layers?
6. Draw the layout of X-ray room.
7. Explain in detail Dental films.
8. What are the factors affecting drying times?

**III. Short answers on:**

**(10x3=30)**

1. Draw a Characteristic curve.
2. pH scale.
3. Loading and unloading a cassette.
4. The development time.
5. Photo stimulated luminescence principle.
6. Dark room.
7. Actinic markers.
8. Mottle.
9. Replenisher.
10. Laser imagers.

\*\*\*\*\*

[LG 0215]

FEBRUARY 2015

Sub.Code :1903

**B.Sc. RADIOTHERAPY TECHNOLOGY  
FIRST YEAR  
PAPER III – RADIOGRAPHIC PHOTOGRAPHY**

***Q.P. Code: 801903***

**Time: Three Hours**

**Maximum : 100 Marks**

**Answer All Questions**

**I. Elaborate on:**

**(3 x 10 = 30)**

1. Explain the structure of X-ray film. What are the advantages of two emulsion layers.
2. What are the constituents of manual processing developing solutions? Describe the functions and purpose of each.
3. Explain in detail contrast of the radiographic image and briefly explain the factors affecting the contrast.

**II. Write Notes on:**

**(8 x 5 = 40)**

1. Draw a Characteristic curve and explain.
2. Briefly describe the types of intensifying screens.
3. Intensifying screens.
4. What is law of reciprocity?
5. Explain the construction of a manual film processor.
6. Explain pH scale.
7. Explain Mottle in detail.
8. What is photo stimulated luminescence?

**III. Short Answers on:**

**(10 x 3 = 30)**

1. Storage of cassettes.
2. Hangers.
3. Method of cleaning screens.
4. The development time.
5. Automatic film processing.
6. Dark room.
7. Explain actinic markers.
8. Laser imaging.
9. Identification of Dental films.
10. Video imaging.

\*\*\*\*\*