

June-2023

# BLDE (DEEMED TO BE UNIVERSITY)

## B.Sc. Medical Imaging Technology

[Time: 3 Hours]

[Max. Marks: 80]

### III SEMESTER

#### PAPER - I (Physics & Medical imaging I)

QP CODE: 8325

Your answer should be specific to the questions asked.

Write Question No. in left side of margin.

#### Long Questions

10X1 = 10 Marks

1. Describe in details the Production of X-rays

#### Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. What is anode angle. How it affects the sharpness of the image.
3. Name the different types of interaction of Radiation with Matter.
4. Draw the cross sectional diagram of Intensifying Screen and label it and describe.
5. Describe the characteristics of Mammography Tube
6. Draw and label X – ray tube
7. Double Coated X-ray film
8. Nature of X-ray.
9. What is geometrical unsharpness and how it can be minimised.
10. The Phosphor material used in the intensifying screen

#### Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. Draw neat label diagram of X – ray film
12. The Function of oil in tube shielding
13. What is grid Ratio, Grid Lattice, and Grid factor,
14. Draw and label TLD batch
15. Factors affecting attenuation.
16. Heel Effect,
17. Write about Bremsstrahlung radiation
18. What is the difference between Mammography X-Ray Tube and ordinary X-Ray tube.
19. what is the significance of kVp and mA.
20. X – ray artefacts
21. What happens when focused grid is placed in a reverse way and x-ray tube is off centred

[Time: 3 Hours]

III SEMESTER

PAPER - II (Radio Graphic Techniques I)

QP CODE: 8326

Your answer should be specific to the questions asked.

Write Question No. in left side of margin.

**Long Questions**

**10X1 = 10 Marks**

1. Explain in detail all the views involved in the imaging of ankle joint.

**Short Essays: (Any – 8)**

**5 X 8 = 40 Marks**

2. Various views of skull.
3. Discuss about barium procedures in brief.
4. HSG.
5. Radiographic techniques to image Femur.
6. Routine abdomen radiography positioning.
7. Radiographic imaging to demonstrate Chance fracture.
8. Explain about the IVP.
9. Write notes on cross table view of skull.
10. Basic views for knee joint.

**Short Answers: (Any – 10)**

**3 X 10 = 30 Marks**

11. Radiography techniques of Mammography
12. Sella view.
13. Elbow joint views.
14. Radiographic views for sternum.
15. Water's view.
16. Radiographic demonstration of calcaneal fractures.
17. Transformers.
18. X ray Abdomen – techniques and positioning.
19. Radiographic demonstration of vertebral body fractures.
20. Radiographic techniques for metatarsal bone fractures.
21. Filters.

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## B.Sc. Medical Imaging Technology

[Time: 3 Hours]

[Max. Marks: 80]

### III SEMESTER

#### PAPER - III (Darkroom techniques)

#### QP CODE: (8327)

Your answer should be specific to the questions asked.

Write Question No. in left side of margin.

#### Long Questions

10X1 = 10 Marks

1. Explain in detail with appropriate diagrams, the construction of Intensifying Screens.

#### Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. Briefly explain the Explain different steps in manual processing
3. Types of X-ray Cassettes.
4. Various uses of single coated X-ray film.
5. Types of Artifacts in X-ray films.
6. Rare earth screens.
7. Fluorescence.
8. Penumbra.
9. Safe Light.
10. Types of intensifying screen.

#### Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. Single emulsion film.
12. Replenishes.
13. Film Artifacts.
14. Wetting Agents
15. Temperature in Developing.
16. Ingredients of Fixer.
17. Green Sensitive Film.
18. Fluorescence.
19. Various speeds of Intensifying Screens
20. Different sizes of Screen-Film Cassettes.
21. Handling of exposed and unexposed films.