BSC PUT - ST

BLDE (DEEMED TO BE UNIVERSITY)

B.Sc. Medical Imaging Technology

[Time: 3 Hours]

Jon-2023.

[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. Write in detail about the different types of Grids and their different characteristics

Short Essays: (Any - 8)

 $5 \times 8 = 40 \text{ Marks}$

- 2. Draw the cross sectional diagram of Intensifying Screen and label it and describe.
- 3. Line Focus Principal,
- 4. What is Stator and What is Rotar of Rotating Anode Tube.
- 5. The Phospers material used in the intensifying screen
- 6. Heel Effect,
- 7. Nature of X-ray.
- 8. What happens when focused grid is placed in a reverse way and x-ray tube is off centred
- 9. The Function of oil in tube shielding
- 10. What is geometrical unsharpness and how it can be minimized.

Short Answers: (Any – 10)

 $3 \times 10 = 30 \text{ Marks}$

- 11. Line Focus Principal,
- 12. What is the difference between Mammography X-Ray Tube and ordinary X-Ray tube?
- 13. Draw the crosses sectional diagram of Intensifying Screen and labels it and describe.
- 14. What is the significance of kVp and mA?
- 15. What is Stator and What is Rotar of Rotating Anode Tube.
- 16. The Function of oil in tube shielding
- 17. What is the function of X-ray cassettes used in Radiology?
- 18. What is grid Ratio, Grid Lattice, and Grid factor,
- 19. Attenuation of X-Ray beam
- 20. Name the different types of interaction of Radiation with Matter.
- 21. How the scattered radiation can be minimized.

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III SEMESTER

PAPER - II (Radio Graphic Techniques I) OP 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. Briefly explain in detail about the various Radiographic Techniques and views for airway foreign body.

Short Essays: (Any - 8)

 $5 \times 8 = 40 \text{ Marks}$

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

Short Answers: (Any - 10)

 $3 \times 10 = 30 \text{ Marks}$

- 11. Radiographic demonstration of vertebral body fractures.
- 12. Self-rectification circuit
- 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. Radiography techniques of Mammography.
- **20.** Radiographic techniques for carpal bone fractures.
- 21. Transformers.

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[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. Define dark room and describe about various types of darkroom entrances. Enumerate the differences between Latent and Manifest images.

Short Essays: (Any - 8)

 $5 \times 8 = 40 \text{ Marks}$

- 2. Why is ventilation of the dark room is important?
- 3. What are the types of door system?
- 4. What is Dark Room Layout?
- 5. What is the function of developer solution?
- 6. Mention any three Emulsion Materials?
- 7. What is Intensification Factor?
- 8. Enumerate any four uses of IV contrast media?
- 9. Mention the steps of automatic processing.
- 10. Enumerate components of Image Quality?

Short Answers: (Any - 10)

 $3 \times 10 = 30 \text{ Marks}$

- 11. What is darkroom?
- 12. What are the two technique used for film processing?
- 13. What are the types of film processing?
- 14. What are the types of filters used in the darkroom?
- 15. What are the types of safelight in the darkroom?
- 16. Developing agents
- 17. What is the pH value of developer solution? And optimum temperature of developer
- 18. What are the ingredients of fixer solution?
- 19. Laser Camera.
- 20. Green sensitive film.
- 21. Processing faults.