

BSc - RI
MET

JAN - 2024

BLDE (DEEMED TO BE UNIVERSITY)

B.Sc. in Medical Imaging Technology

[Time: 3 Hours]

[Max. Marks: 80]

VI SEMESTER

PAPER I - (Quality Assurance in Medical Imaging)

QP CODE: 8625

Your answer should be specific to the questions asked.

Write Question No. in left side of margin.

Long Questions

10X1 = 10 Marks

1. What is the Aim of quality assurance in medical imaging?

Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. What are the beam limiting devices?
3. What are the new technology used in the viewing boxes?
4. What care will be taken before choosing the x-ray machines?
5. Explain about the position of the darkroom and inner structure of the darkroom?
6. Write about Tomography test tools?
7. What should be the dimensions of different x-ray rooms?
8. Which film will produce high resolution sharpness, good contrast film and QA?
9. How the location of x-ray department will felicitates patient comfort?
10. What is water phantom and its role in QA?

Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. What is the role of cassettes in Radiography and QA?
12. What is the aim of quality assurance in medical imaging?
13. Explain about the Measuring calipers and QA?
14. What are artifacts?
15. What are the measuring calipers?
16. Where should be the location of the radiology Department?
17. How the collimator improves the quality of a radiograph?
18. How the image quality can be improved with potter Bucky and upright Bucky?
19. Write in details about the films and chemical storage in darkroom?
20. Where Aluminum step wedge is used?
21. Draw a neat labelled diagram of x-ray room layout?

JAN-2024

BLDE (DEEMED TO BE UNIVERSITY)

B.Sc. in Medical Imaging Technology

[Time: 3 Hours]

[Max. Marks: 80]

VI SEMESTER

PAPER II - (Modern Technologies in Imaging)

QP CODE: 8626

Your answer should be specific to the questions asked.

Write Question No. in left side of margin.

Long Questions

10X1 = 10 Marks

1. Explain about reconstructive algorithms of Computed Tomography?

Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. What is alignment in MRI?
3. What is magnet and explain types of magnets?
4. Write about Quality Control in CT scan?
5. Explain about Mammography equipment's?
6. Write the Hounsfield Units (HU) of Human body?
7. What are the types of acquisition in MRI?
8. Write about Gantry of Computed Tomography?
9. What is T1 relaxation?
10. What is windowing and write about window length and window width?

Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. Write the indications and contraindications of MRI scan?
12. What is Inversion recovery?
13. What is Beam Hardening Artifact in CT scan?
14. What is Metal Artifact in CT scan?
15. What is Cryostat?
16. What is the basic principle of Tomography?
17. Write components of the MRI system with diagram?
18. Explain about patient table in Computed Tomography?
19. What is Relaxation in MRI?
20. What is Back projection in CT scan?
21. Write the advantages and disadvantages of EBCT?

JAN-2024

BLDE (DEEMED TO BE UNIVERSITY)

B.Sc. in Medical Imaging Technology

[Time: 3 Hours]

[Max. Marks: 80]

VI SEMESTER

PAPER III - (Radiation Physics & Radiation Protection)

QP CODE: 8627

Your answer should be specific to the questions asked.

Write Question No. in left side of margin.

Long Questions

10X1 = 10 Marks

1. Explain the types of biological effects on cellular level?

Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. What are biological effects of radiation?
3. What is ARS and write its syndrome?
4. Explain about Half value layer?
5. What is shielding write about primary and secondary shielding?
6. Draw a neat diagram of OSL dosimeter, and its advantages and disadvantages?
7. Dose limits for occupational and public according to ICRP?
8. What is radiation? And its types?
9. Draw a diagram of trefoil and its dimension?
10. Explain about the working principle of film badge?

Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. What is ALARA?
12. What are the Symptoms of prodromal stage?
13. What is Hematopoietic radiation stage?
14. Write the characteristics of x-rays?
15. What are the Radiation quantities and units?
16. What are ICRP recommendation?
17. Write about filters used in film badge?
18. Draw a model layout of CT unit?
19. What is KERMA and HALFLIFE?
20. What are different types of regulatory bodies?
21. What are the Radiation barriers?

JAN-2024

BLDE (DEEMED TO BE UNIVERSITY)

B.Sc. in Medical Imaging Technology

[Time: 3 Hours]

[Max. Marks: 80]

VI SEMESTER

PAPER IV - (BMIT Directed Clinical Education-IV)

QP CODE: 8628

Your answer should be specific to the questions asked.

Write Question No. in left side of margin.

Long Questions

10X1 = 10 Marks

1. Draw a neat labelled diagram of Heart and explain in brief about blood circulation of Heart?

Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. Draw a neat labelled diagram of ventricles of the brain and connection between them?
3. Write in brief about the patient preparation and filming of barium meal procedure?
4. Mention the technical protocols used in HRCT chest?
5. Mention the role of USG in 2nd Trimester of Pregnancy?
6. Write the Radiographic techniques of Mastoid lateral view, and Skull PA?
7. Explain about CT Artifacts?
8. Explain film processing technique in brief?
9. Name the lobes of the brain and draw a neat labelled diagram?
10. Draw a neat labelled diagram of Hepato-biliary system and explain about it?

Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. What is X-ray tube and write the components of X-ray tube?
12. What is anode Heel effect?
13. Write the properties of X-ray?
14. What is consent and write the components of consent?
15. Draw a neat labelled diagram of liver and write its functions?
16. What is the contrast media used for the RGU? What is the dosage administration?
17. How many films are taken for standard IVU procedure?
18. Write patient preparation and position for Chest Lordotic view?
19. Write the indications and contraindications for Skull AP view?
20. Write patient preparation and position for Scaphoid AP (Ulnar deviation) view?
21. What is intracranial hemorrhage and types?