

2/7/26
PM

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. Write in details about Film / screencontact test tool?

Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. Draw the complete layout of the department layout?
3. Quality Assurance in Radio diagnosis Department?
4. How the lead rubber apron and gloves affects the quality assurance in medical imaging?
5. What are the patient positioning aids and QA, List the patient positioning aids?
6. Choosing options of x-ray equipment and QA, What are the different attachments to the ordinary x ray machine (accessories)?
7. How the water Bucky diaphragm will improve the image quality, what are the different contents of water Bucky diaphragm?
8. Recent (present) mobile X ray units has rotating anode tube. How will it help to produce good radiograph during ward or OT radiograph?
9. Which film will produce high resolution sharpness good contrast film and QA?
10. How the location of X ray department Will felicitates patient comfort?

Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. Draw the x-ray room layout. With dimensions and label it?
12. Write something about the Location of the radiology department?
13. Write something about the location of x-ray department?
14. Generator (transformer / rectifier / high frequency generator) and QA?
15. How the Grid and Collimator plays and important role in Quality Assurance?
16. Draw the labelled diagram of mammography room layout?
17. What is Tomography test tools?
18. How KVP and mA plays an important role in quality assurance?
19. What is measuring calipers?
20. What are artifacts?
21. How the column and table top affects the quality of radiography?

July 2028

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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 electron beam computed tomography?

Short Essays: (Any – 8)

5 X 8 = 40 Marks

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

Short Answers: (Any – 10)

3 X 10 = 30 Marks

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

20. Write the advantages and disadvantages of EBCT? → Attempted as Q-21.
21. What is the basic principle of Tomography? → Attempted as Q-20

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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. What is radiation explain the history of radiation and its properties?

Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. What are acute radiation syndrome?
3. Write about OSL dosimeter?
4. Explain about TDS rule?
5. Write the difference between ionizing radiation and non-ionizing radiation?
6. What is stochastic effects and its types with its graphical representation of radiation dose?
7. Draw a diagram of radiation signage's and write about Tre- foil?
8. Explain the working principle of TLD badge?
9. What is barriers, what are primary and secondary barriers?
10. Draw a layout of interventional radiology layout?

Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. What are ICRP recommendation?
12. Write the advantages and disadvantages of TLD dosimeter?
13. What is the Causes of genetic mutation?
14. What are the Principles of radiation protection?
15. Model layout of mammography unit?
16. What are the stages of radiation syndromes?
17. What is radiation quantities and its types?
18. What is Radiation sensitivity 1?
19. What is ALARA?
20. Define dosimeter and its types?
21. Write a short note on radiation signage's?

Handwritten marks and calculations in the bottom right corner, including a grid of numbers (58, 55, 49, 46, 50, 48, 54, 60) and some scribbles.

9/7/26
P07

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. Explain Barium Meal procedure in brief?

Short Essays: (Any – 8)

5 X 8 = 40 Marks

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

Short Answers: (Any – 10)

3 X 10 = 30 Marks

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