



BRAINWARE UNIVERSITY

Term End Examination 2023-2024

Programme – B.Sc.(MRIT)-2022

Course Name – Physic of Modern Radiographic and Imaging Equipment-Digital Radiography,CT

Course Code - BMRITC402 (Semester IV)

Full Marks : 60

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 15=15

Time: 2:30 Hours

- Choose the correct alternative from the following :
- (i) Identify CT scan was invented by?

a) Godfrey Hounsfield

b) Wilhelm Cornard Roentgen

c) Alan Cormack

d) None of these

- (ii) Identify Image reconstruction was evaluated Mathematically by?
 - a) Wilhelm Cornard Roentgen

b) Alan Cormack

c) Godfrey Hounsfield

- d) None of these
- (iii) Identify Contrast resolution in Computed Tomography is?

a) Less than conventional film

b) Better than conventional films

c) Same as conventional films

d) None of these

(iv) Select the Coefficient of Water?

a) 0.18

b) 0.36

c) 0

d) 0.19

(v) Select the Coefficient of Bone?

a) 0.38

b) 0

c) 0.19

d) 0.91

(vi) Select the Coefficient of Air?

a) 0.19

b) 0.38

c) 0

d) 0.83

(vii) What type of beam is used by 1st generation CT Scan? Select the correct option.

a) Broad fan beam

b) Multiple X-ray beam

c) Narrow Fan Beam

d) Pencil beam of X-rays

(viii) What type of beam is used by 2nd generation CT Scan?

a) Multiple X-ray beam

b) Narrow Fan Beam

c) Broad fan beam

d) Pencil beam of X-rays

(ix) State that which type of beam is used by 3rd &	4th generation CT Scan? Select the	
correct option.		
a) Multiple X-ray beam	b) Narrow Fan Beam	
c) Pencil beam of X-rays(x) What type of beam is used by 5th generation 0	d) Broad fan beam CT Scan? Select the correct option.	
	b) Broad fan beam	
a) Multiple X-ray beam	d) Pencil beam of X-rays	
c) Narrow Fan Beam (xi) Recognize in CT Scan the 1st generation is?	a) remains a series of	
• •	b) Translate-rotate type	
a) Rotate-rotate type	d) None of these	
c) Stationary-rotate type	a) None of these	
(xii) Recognize in CT Scan the 2nd generation is?	b) Stationary-rotate type	
a) Rotate-rotate type	d) None of these	
c) Translate-rotate type	dy None of these	
(xiii) Recognize in CT Scan the 3rd generation is?	b) Translate-rotate type	
a) Rotate-rotate type	d) None of these	
c) Stationary-rotate type	d) Notice of these	
(xiv) Recognize in CT Scan the 4th generation is?	h) Stationary rotate type	
a) Rotate-rotate type	b) Stationary-rotate typed) None of these	
c) Translate-rotate type	a) None of these	
(xv) Select the correct option: What is a Pitch?	1) a la company and 200 degree	
 a) Couch movement each 360 degree added by slice thickness 	 b) Couch movement each 360 degree Multiplied by slice thickness 	
c) Couch movement each 360 degree divided	d) None of these	
by slice thickness	The state of the second	
	up-B	
(Short Answer	Type Questions)	3 x 5=15
		(3)
2. Describe the display of CT images?		(3)
3. How CT Scan Produce data for image formation?		(3)
4. Write a short note on NCCT Abdomen. 5. What is window width?		(3)
		(3)
6. Explain how x-rays are captured in PSP?	OR .	(3)
Express RIS?		(3)
Express his:		(3)
	up-C	5 x 6=30
(Long Answer	Type Questions)	3 X 0-30
7. Explain CT Brain protocol.		(5)
8. Explain CBCT and its clinical application.		(5)
9. Explain the processing technique in CT Scan.		(5)
10. Explain MRI Brain Protocols.		(5)
11. Describe the various generations of CT scan using its diagram.		(5)
12. Write notes on thorax CT.		(5)
the state of the s	OR	
Write short notes on factors affecting image qu techniques also.	ality in CT scans and post-processing	(5)