



## **BRAINWARE UNIVERSITY**

## Term End Examination 2023-2024 Programme – B.Sc.(MRIT)-2022

## Course Name – Radiographic Techniques of Mammography, DEXA, Oral Radiography with Image Interpretation Course Code - BMRITC301

( Semester III )

Full Marks: 60 Time: 2:30 Hours

[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

- 1. Choose the correct alternative from the following:
- (i) Explain how is the anode-heel effect addressed in mammography X-ray tubes
  - a) By increasing the tube current
- b) By using a larger focal spot size
- c) By placing the thickest part of the breast at the anode end
- d) By applying additional filtration
- (ii) Identify the primary purpose of mammography
  - a) Detection of lung diseases
- b) Assessment of bone density
- c) Screening and diagnosis of breast cancer
- d) Examination of the gastrointestinal tract
- (iii) Identify the modalities used for dental radiography
  - a) EBCT

b) HRCT

c) CBCT

- d) All of these
- (iv) Identify the type of dental radiograph provides a comprehensive view of both upper and lower jaws in a single image.
  - a) Bitewing radiograph

b) Periapical radiograph

c) Panoramic radiograph

- d) Occlusal radiograph
- (v) Which of the following is the most common technique to measure the bone density?
  - a) USG

b) MRI

c) DEXA

- d) All of these
- (vi) Select the correct statement about Bitewing radiographs
  - a) Useful in monitoring the progression of Periodontal disease.
- b) Useful in monitoring the progression of
- c) Useful in monitoring the progression of Root canal therapy.
- Orthodontic treatment.
  d) Useful in monitoring the progression of
- Root canal therapy. Dental implants. (vii) Choose the modalities used in bone density measurment
  - a) QCT

b) QUS

c) DEXA

d) All of these

(viii	) Which of the following densitometry modalities	usea radioiso	topes:		
<i>.</i>	a) Single photon absorptiometry c) Both 1 & 2	b) Double ph d) None of th	oton absorptiometry nese		
(IX)	Select the purpose of Occlusal radiographs				
	a) Occlusal radiographs are useful for assessing	b) Dental car	ies		
	c) Tooth impactions	d) Root cana	therapy		
(x)	The grid ratio can vary in modern mammograph	•		io	
• •	used in mammography	,			
	a) 8:1	b) 6:1			
	c) 5:1	d) 2:1			
(xi)	Tell the role of compression during a mammogram.				
	a) It brings lesions closer to the detector for more accuracy when evaluating fine detail.		the possibility of mot ng the breast during t		
	c) Both 1 and 2	d) To optimize thickness	e X-ray exposure base	d on breast	
(xii)	Identify the correct statement regarding T-Score				
	<ul> <li>a) A T-score represents how many standard deviations (SD) a person's BMD is above or below the average BMD of a young, healthy adult population of the same sex.</li> </ul>	typically co	nce population for T-somposed of young add the ages of 20 and 30.		
	c) T-scores are used primarily for diagnosing osteoporosis and assessing fracture risk.	d) All of these	9		
(xiii	) Label the primary use of DEXA scans				
	a) Bone density	b) Muscle ma	SS		
(xiv	c) Lung function ) What does a BIRADS 2 category represent?	d) Brain activ			
	a) High likelihood of breast cancer	b) Benign find	dings		
(xv)	c) Indeterminate findings  Omit the correct indication of Mammography	d) Malignant	findings		
	a) Lactating Women	b) Nipple Ret	raction		
	c) Pregnancy	d) All of the a	bove		
	Grou	n_R			
	(Short Answer Ty			3 x 5=15	
		•			
2. V	What is the difference between T-score and Z-scor	in DEXA scan	reports?	(3)	
3. E	xplain the advantages of Breast Compression			(3)	
4. D	escribe Beam-Restricting Devices in Mammograp	hy		(3)	
5. W	/hy is mammography important for breast health	, iha tha factor	Affecting focal enot s	(3)	
	xplain focal spot size of mammographic also desc lammography	ibe the factors	s Affecting local spot s	126 111 (3)	
IV	OF				
E	xplain the essential image criteria of CC Projectio	in Mammogr	aphy.	(3)	
	Grou	o-C			
	(Long Answer Ty			5 x 6=30	
7.	Write a short note on CC projection of mammogr	phy		(5)	
8.	. Write in detail about advantages and disadvantages of dental radiography			(5)	
	Write notes on the T & Z Score in DEXA.			(5)	

10. Write short not on DEXA equipment.	/E		
11. Distinguish between Direct and Indirect Digital Mammography	(5)		
13. Discuss the challenges at the multiplet bigital mattinggraphy	(5)		
12. Discuss the challenges and limitations of breast biopsy procedures.	(5)		
OR			
Explain routine mammography projection with patient position technique.	(5		
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