4.4





## **BRAINWARE UNIVERSITY**

Term End Examination 2023
Programme – DMLT-2022
Course Name – Clinical Biochemistry
Course Code - DMLT205
( Semester II )

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

- Choose the correct alternative from the following :
- (i) Name the sugar present in RNA
  - a) β-D-ribose

b) β-D-fructose

c) β-D-galactose

- d) β-D-2-deoxyribose
- (ii) Identify the complementary strand of the DNA primary structure ATGCCGATC.
  - a) AUGCCGAUC

b) TACGGCTAG

c) UACGGCUAG

- d) GATCGGCAT
- (iii) If a Hb electrophoresis is done at pH 8.6 of a mixtures of different Hb fractions, the least moved Hb fraction is-Choose the correct option
  - a) HbC

b) HbA

c) HbE

- d) HbS
- (iv) Relative molecular mass can be determined by all except-Choose the correct option
  - a) SDS-PAGE

- b) MALDI and ESI
- c) Gel filtration chromatography
- d) ELISA
- (v) Pick the Chromatographic technique which is not a Column-type Liquid Chromatography
  - a) Gel permeation

b) Ion Exchange Chromatography

- c) Liquid-Solid Chromatography
- d) Paper Chromatography
- (vi) Name the enzyme that polymerises the Okazaki fragments during DNA Replication
  - a) RNA Polymerase I

b) DNA Polymerase I

c) DNA Polymerase II

- d) DNA Polymerase III
- (vii) Name the inverted sugar from the following
  - a) Sucrose

b) Fructose

c) Dextrose

d) Glucose and Lactose

(viii) Identify which is pentose sugar		
a) Glucose	b) Glycerose	
c) Ribose	d) Fructose	
(ix) Molisch test is used forldentif	y the correct answer	
a) Lipid	b) Protein	
c) Mucoprotein	d) Flavoprotein	
(x) Identify the site where HDLs are synthesiz		
a) Blood	b) Liver	
c) Pancreas	d) Intestine	aral
(xi) Hypercholesterolemia refers to a condition level of		eroi
a) >160 mg/dL	b) >200 mg/dL	
c) >240 mg/dL	d) >280 mg/dL	
(xii) Identify which among the following is a no	,	
a) Threonine	b) Serine	
c) Lysine	d) Histidine	
(xiii) In chromatography, the stationary phase of	·	
solid.Choose the correct option-		
a) Solid or liquid	b) Solid or gas	
c) Gas or liquid	d) Only liquid	
(xiv) Pick the amino acids with hydroxyl group	, , ,	
a) Serine and Alanine	b) Alanine and Valine	
c) Serine and Threonine	d) Valine and Isoleucine	
(xv) Write which of the following makes water	-	
<ul><li>a) Noncovalent interactions</li><li>c) Van der Waals forces of attraction</li></ul>	<ul><li>b) Hydrogen bonds between water</li><li>d) Covalent bonding</li></ul>	molecules
	Group-B	
(Short An	swer Type Questions)	3 x 5=15
2. Distinguish oligosacchride and polysaccharid	e with example	(3)
3. Discuss about Ketone bodies with examples		(3)
4. Explain zwitterion and isoelectric point of amino acid		(3)
5. Write about the Hemoglobin electrophoresis		(3)
6. Explain Western blot		(3)
	OR	
Illustrate about Size exclusion chromatograph	ny	(3)
	Group-C	
(Long Answer Type Questions)		5 x 6=30
(FOLIS VIII	wer type questions,	3 x 0-30
7. Discuss about monosaccharide and disaccharide	aride with their clinical significance	(5)
- A A A A A A A A A A A A A A A A A A A		(5)
a a		(5)
10. Describe RIA test with suitable diagram		(5)
		(5)
11. Explain stages of glycolysis	f chromatography	
12. Illustrate the advantage and disadvantage of chromatography		(5)
The state of the s	OR	/c\
Explain the function of SDS and PAGE in the	neid or protein separation	(5)