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ROLL NUMBER:	
	10

WRITTEN TEST FOR MFCP OF TECHNICAL ASSISTANT (LAB) BIOCHEMISTRY – A TO B

DATE: 26/11/2019

TIME: 9.30 AM

DURATION: 60 MINUTES

TOTAL MARKS: 50

INSTRUCTIONS TO THE CANDIDATE

- 1. Write your Roll Number on the top of the Question Booklet and in the Answer Sheet.
- 2. Each question carries 1 mark.
- 3. There will not be any Negative Marking.
- 4. Write legibly the alphabet of the most appropriate answer in the separate answer sheet provided.
- 5. Over-writing is not permitted.
- 6. Marking more than one answer will invalidate the answer.
- 7. Candidate should sign on the Answer Sheet.
- 8. Candidate should hand over Answer Sheet to the invigilator before leaving the examination hall

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WRITTEN TEST FOR I MFCP – TECHNICAL ASSISTANT (LAB) BIOCHEMISTRY - A TO B

1. In the indirect ELISA test the enzyme linked antibod	dy will attach to
A) The constant region of the patient antibody	
B) The variable region of the patient antibody	
C) The patient antigen	
D) The wall of the ELISA plate	
2. Following statements are true regarding Quality Mar	nual except:
A) The quality manual is never finished- it is always	-
B) It should be read, understood and accepted by eve	• ,
C) Every employee should have an official copy of i	•
D) It should be written in clear and easily understood	
3. The speed of migration of proteins in an electrophor	esis depends on
A) Magnitude of charge, shape and massB) Shape and size	
C) Magnitude of charge and shape	
D) Magnitude of charge and mass	
4. Percentage of Hemoglobin A2 found in adults' blood	4
A) 95-98%	C) 1-2%
B) 2-3%	D) Zero
5. Lower hematocrit level seen in	-, -, -, -, -, -, -, -, -, -, -, -, -, -, -
A) Dehydration	C) Iron deficiency anemia
B) Dengue fever	D) High altitude
6. Propionic and methylmalonic acidemias are commor	aly differentiated by which of the
following tests:	, and and
A) Organic acids by GC/MS	
B) Acylcarnitines by tandem mass spectrometry	
C) Amino acids by MS/MS	
D) PCR for specific genetic defects	
7. Which of the following does NOT describe advantag	ges of ELISA tests?
A) They can detect either antigens or antibodies	
B) They can quantify the amounts of antigen or antib	oody in a sample
C) They can be easily automated	
D) They can demonstrate the presence of multiple an	tigens
8. You have left the tourniquet on for more than the rec	ommended time period. Which of the
following analytes will be falsely increased in the blo	
A) Sodium B) Potassium	C) Urea
9. In respiratory alkalosis:	D) LDH
A) Increased PCO ₂ , decreased HCO ₃	C) Dearney I DGO I
B) Increased PCO ₂ , increased HCO ₃	C) Decreased PCO ₂ , decreased HCO ₃
10. The best combination of tests to screen for monoclon	D) Decreases PCO ₂ , increased HCO ₃
A) Serum immunoglobulin concentrations (IgG, IgA,	lar proteins (ivi-proteins):
B) Serum protein electrophoresis and immunofixation	
C) Serum and urine protein electrophoresis	n electrophoresis
D) Urine protein electrophoresis and immunofixation	alaatmant !
11. Production of biologically active Vitamin D (Calcitri	al) is modified that the
which organ?	or) is mediated by 1α-hydroxylase in
A) Kidney	C) Liver
B) Skin	D) Liver and Kidney
12. What is the main advantage of Point of care testing?	-, bivoi and Kiulley
A) Cost	C) Lack of limitations
B) Speed	D) Ease of training

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13. Which of the following protein level increase after and decline after treatment?	myocardial infarction, infect	ion,trauma
A) Bilirubin	C) Clabutin	
B) Alpha1-antitripsin	C) Globulin	
14. In protein gel electrophoresis, the hand of LDL is	D) C-reactive protein	
14. In protein gel electrophoresis, the band of LDL is aA) Alpha-1 zone	found in which region?	
B) Alpha-2 zone	C) Beta zone	
	D) Gamma zone	
15. A patient with elevated enzyme level and not havinA) False negative	ig the disease means the resul	t is?
B) False positive	C) True positive	
16 The "Westgowd" male relative "	D) True negative	
16. The "Westgard" rule violation "when one control n +2s control limit and another one exceeds a -2s con	neasurement in a group excee	ds the mean
A) 2 _{2s}	C) 1 _{3s}	
B) 1 _{2s}	D) R _{4S}	
17. Amount of TRIS required to make 1M buffer (pH-8	2) in 500 ml water (m.v. e£TD	10.101.14
g/mol]	o) in 300 iii watei [iiiw 01] R	115:121.14
A) 121.14 mg	C) 30.285 gm	
B) 121.14 gm	D) 60.57 gm	
18. Normal pH of blood	D) 00.37 gm	•
A) 7.2 B) 7.3	C) 7.4	D) 70
19. The direct ELISA test requires	O) 7.4	D) 7.0
A) Known antigen	C) Complement	
B) Known antibody	D) Patient antibody	•
20. In hepatolenticular degeneration (Wilson's disease)	b) Patient antibody	
A) Amino aciduria and increased plasma copper		
B) Decrease in plasma ceruloplasmin and increased	overation of	•
C) An increased plasma ceruloplasmin and decreased	d exerction of copper in the un	ine
D) Decrease in plasma copper and increased plasma	ceruloplasmin	ırıne
21. An anti-antibody is an antibody directed against whi	ch of the following?	
A) Another antibody molecule	en of the following?	
B) Two or more different antigens		
C) A large, complex antigen		
D) An antigen found on normal body cells		
22. Serum α-Amylase level is a diagnostic test for?		
A) Hepatitis	C) Agusta Damanastiti	
B) Diabetes	C) Acute Pancreatitis	
23. Presence of porphyrins in urine can be detected by	D) Stroke	
A) Absorption at 565 nm	C) Soblesianan's test	
B) Fouchet's test	C) Schlesinger's test	
24. Following reagents are used except, in the enz	D) UV fluorescence	
A) Glucose oxidase	ymatic glucoseestimation me	thod
B) NAD+	C) Peroxidase	
25. Buffers are mixtures of	D) H_2O_2	
A) Strong gold and strong 1		
A) Strong acid and strong base B) Week base and the	C) Weak acid and their cor	jugate base
B) Weak base and their conjugate acid	D) Change and and and the	
26. Which of the following parameters is not affected eve of blood collection?	en if the assay is carried out a	fter 6 hours
A) Glucose	C) Carbondioxide	
B) Potassium	:	
	D) Albumin	•

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27	. Wh	en pH falls by 1 unit, th	e hydrogen ion concentrat	ion:		
		Decrease 10 times	, ,		Decrease 2 times	
	B)	Increase 2 times		D)	Increase 10 times	
28	. The	Coefficient of variatio	n (CV) is expressed as (σ i	s stai	ndard deviation and μ	is mean)
	A) (σ/μ	B) σ^2/μ^2	C)	σ^2/μ	D) σ/μ^2
29	. Inte	ernal Quality Control (I	QC) primarily checks	•	•	, .
		Precision	•	C)	Systematic errors	
	•	Accuracy			All the above	
30		•	pagulant for hemoglobin el	•		ation0
		Sodium Citrate	bagaiant for nemogrouni c		Sodium Heparin	ction?
	_ •	EDTA		-	Potassium Oxalate.	
	•		of blood samples for gluc			enzyme.
		Glucokinase	. 0. 0.000 50		Enolase	clizyille.
	-	Hexokinase		•	Glucose-6-phosphat	e
32		ich among the following	g best definesferritin.	-,	, c.ucose o pilospilat	
			ycoprotein that controls th	e lev	els of free Iron.	
			at stores Iron and releases			
			at mediate electron transfe			
	D)	Iron containing granul	ar pigment.			
33		example of a preanalyti				
		Lack of frequent Preve				
		Reporting of laborator				
		Specimen obtained fro				
		Undetected failure in (
34.	. In P	Post Hepatic jaundice, w	hich among the following	is de	tected in the urine	
	-	Bilirubin		C)	Urobilinogen	
		Biliverdin			Both Bilirubin and U	
35.	The	pH of the body fluids in	s stabilized by buffer syste	ms. '	Which of the following	g buffers is
			stems at physiological pH.			:
		Phosphate Buffer		_	Protein Buffer	
•	•	Bicarbonate Buffer			Deoxyhemoglobin	
36.			g is the normal range of Blo			for an adult?
		0.5-1.5 mg/dl			100-250 mg/dl	
27		5-20 mg/dl		. D)	250-500mg/dl	
) / •		at type of urine will cau Highly acidic urine	se false positive result for			
		Highly alkaline urine			Highly pigmented ur	
RΩ			onate (HCO3-) indicates	D)	Urine with a high spe	ecific gravity
٠٠.		Metabolic Acidosis	mate (mcO3-) indicates	C	Masshalls Allester	
		Respiratory Alkalosis			Metabolic Alkalosis	
80			os an absorbance of 0 500	U)	Respiratory Acidosis	3
,,,	colo	ured solution will be	nas an absorbance of 0.500	. I ne	absorbance of 10ml	of the same
		1.000	B) 0.500	C)	0.250	D) 0.100
រោ	-		•		0.250	D) 0.100
· ••	Δ 1	666ml	added to 500ml of a soluti B) 125ml			
[1			is an abnormal constituen		166ml	D) 250ml
		Urea	, is an aunormal constituen			
	•	Glucose			Cholesterol	
	<i>U)</i>	Gracosc		U)	Uric acid	

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42. In	myocardial infarction, which	h is the last enzyme to h	be rai	sed and last long
A)		CK-		AST
		MB	D)	LDH
43. If a	dried smear cannot be stair	ned immediately, it show	uld b	e preserved by immersing in
A)	Methanol	-		Eosin
B)	Ethanol		D)	Methylene blue
44. Fib	rinogen abnormalities are d	etected using which of	the fe	ollowing test
A)	Thrombin time	_		Hemoglobin
-	APTT/PTT		D)	Bleeding time
45. All	oumin level in blood is estin	nated by:	•	•
A)	Jaffe's picric acid reaction	ì	C)	Diacetyl monoxime method
B)	Bromocresol green reaction	on		Chromatography
46. Wh	ich of the following test cou	uld <u>not be performed or</u>	ı seru	ım sample
A)	Iron	 .		Clotting factors
B)	Total Lipids			Vitamin B12
	lium is important for the ma	intenance of	-,	
A)	Blood Coagulation		C)	Cardiac muscle contraction
	Osmotic pressure of Body	fluids		Salt intake
	normal renal threshold for		roxi	nately
A)	50mg/dl	B. weese in addits is upp	 C)	160mg/dl
	100mg/dl		D)	320mg/dl
49. Osr	nolarity is a measure of			
A)	Dissolved particles, including	ing ions		
B)	Undissociated molecules o	only		
	Total salt concentration			
	Molecular size			
50. Wha	at is the closeness of agreen	nent between the result	of a	measurement and the true value of
a m	easurang.			
A)	Accuracy			Originality
\mathbf{p}_{D}	Precision		D)	Trueness

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Answer key-I MFCP-Technical Assistant (lab) Biochemistry A to B

1 A 23 D 45 B 2 C 24 B 46 C 3 C 25 C 47 B 4 B 26 D 48 C 5 C 27 D 49 A 6 A 28 A 50 A 7 D 29 A A 50 A 8 B 30 B B B 9 C 31 C 10 C 32 B 11 A 33 C 11 A 33 C 11 A 33 C 12 B 34 A A 13 D 35 B B 14 C 36 B 15 B 37 C 16 D 38 A A 17 D 39 B 18 C 40 C 19 B 41 C 20 B 42 D 20 </th <th>Question Number</th> <th>Answer</th> <th>Question Number</th> <th>Answer</th> <th>Question Number</th> <th>Answer</th>	Question Number	Answer	Question Number	Answer	Question Number	Answer
3		Α		D		В
4 B 26 D 48 C 5 C 27 D 49 A 6 A 28 A 50 A 7 D 29 A 8 B 30 B 9 C 31 C 10 C 32 B 11 A 33 C 12 B 34 A 13 D 35 B 14 C 36 B 15 B 37 C 16 D 38 A 17 D 39 B 18 C 40 C 19 B 41 C 20 B 42 D 21 A 43 A	2	С	24	В	46	С
5 C 27 D 49 A 6 A 28 A 50 A 7 D 29 A 8 B 30 B 9 C 31 C 10 C 32 B 11 A 33 C 12 B 34 A 13 D 35 B 14 C 36 B 15 B 37 C 16 D 38 A 17 D 39 B 18 C 40 C 19 B 41 C 20 B 42 D	3	С	25	С	47	В
6 A 28 A 50 A 7 D 29 A 8 B 30 B 9 C 31 C 10 C 32 B 11 A 33 C 12 B 34 A 13 D 35 B 14 C 36 B 15 B 37 C 16 D 38 A 17 D 39 B 18 C 40 C 19 B 41 C 20 B 42 D	4	В	26	D .	48	С
7 D 29 A 8 B 30 B 9 C 31 C 10 C 32 B 11 A 33 C 12 B 34 A 13 D 35 B 14 C 36 B 15 B 37 C 16 D 38 A 17 D 39 B 18 C 40 C 19 B 41 C 20 B 42 D 21 A 43 A	5	С	27	D	49	Α
8 B 30 B 9 C 31 C 10 C 32 B 11 A 33 C 12 B 34 A 13 D 35 B 14 C 36 B 15 B 37 C 16 D 38 A 17 D 39 B 18 C 40 C 19 B 41 C 20 B 42 D 21 A 43 A	6	Α	28	Α	50	Α
9	7	D	29	Α		
10	8	В	30	В		
11	9	С	31	С		
12 B 34 A 13 D 35 B 14 C 36 B 15 B 37 C 16 D 38 A 17 D 39 B 18 C 40 C 19 B 41 C 20 B 42 D 21 A 43 A	10	С	32	В		
13 D 35 B 14 C 36 B 15 B 37 C 16 D 38 A 17 D 39 B 18 C 40 C 19 B 41 C 20 B 42 D 21 A 43 A	11	Α	33	С		
14 C 36 B 15 B 37 C 16 D 38 A 17 D 39 B 18 C 40 C 19 B 41 C 20 B 42 D 21 A 43 A	12	В	34	Α		
15 B 37 C 16 D 38 A 17 D 39 B 18 C 40 C 19 B 41 C 20 B 42 D 21 A 43 A	13	D	35	В		
16 D 38 A 17 D 39 B 18 C 40 C 19 B 41 C 20 B 42 D 21 A 43 A	14	С	36	В		
17 D 39 B 18 C 40 C 19 B 41 C 20 B 42 D 21 A 43 A	15	В	37	С		
18	16	D	38	Α	-	
19 B 41 C 20 B 42 D 21 A 43 A	17	D	39	В		
20 B 42 D 21 A 43 A	18	С	40	С		
21 A 43 A	19	В	41	С		
	20	В	42	D		
22 C 44 A	21	A	43	A		
	22	С	44	Α		

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