B

COLLEGE OF ENGINEERING AND TECHNOLOGY
SCHOOL OF BIOENGINEERING, DEPARTMENT OF BIOTECHNOLOGY
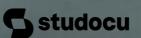## B. Tech. Biotechnology Core and RM & GE Specializations

SRM

ACADEMIC YEAR 2024-25 – ODD SEMESTER
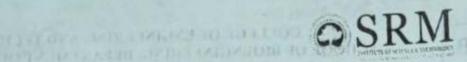### Continuous Learning Assessment Test II - FT 4

Reg. No.	R	A									

Course Code:	21BTB102T	Course Title: INTRODUCTION TO COMPUTATIONAL BIOLOGY	
Sem & Year: 1/1	Date: 04/12/24	Duration: 100 Minutes	Max. Marks: 50

Course Outcomes (COs)		Program Outcomes (POs)												PSOs		
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO-3	Solve protein sequence analysis and biological structure prediction using computing techniques	2	3	-	1	3										
CO-4	Integrate neuronal mechanisms and computer applications that replicate its workings	1	2	2	1	3										
CO-5	Integrate the immune system and its workings to predict vaccine candidates	3	-	2	2	3										

Part A Choose the BEST Answer   (15 MINS)   11 x 1 Mark = 11 Marks

Q. No.	Questions	Marks	CO	BL	Marks Scored	PO(s)/ PSO
1.	How many codons code for 20 amino acids a) 50 b) 96 c) 64 d) 46	1	3	L1		5
2.	The start codon AUG codes for-------- a) Methionine b) lysine c) leucine d)glycine	1	3	L2		5
3.	RNA polymerase is a part of ------- a) Replication b) translation c) transcription d)splicing	1	3	L3		5
4.	Find the ODD feature about dendrites a) Short b) many in number c) unbranched d)pushes electric signal towards cell body	1	4	L3		5
5.	The action potential in a neuron is also called a) Depolarization b) polarization c) repolarization d) refractory	1	4	L3		5
6.	The electrical signal is converted to chemical signal at the a) Synapse b) soma c)axon d) dendron	1	4	L2		5
7.	Afferent pathways conducts nerve signal a)Away from CNS b) towards CNS c)only in PNS d)none of them	1	4	L3		5
8.	----------- is part of a nonself cell a) Epitope b) tepitope c) paratope d) bepitope	1	5	L1		5
9.	Other than the RBCs and WBCs---------makes up for the 45% cellular content in the blood a) Stem cells b) platelets c)bacteria d)globins	1	5	L3		5
10.	Basophils are usually less than _____ % in a normal human a) 2 b)4 c) 1 d)20	1	5	L3		5
11.	-----------are produced by ~~these~~ Some WBCs against allergies a) Histamines b) morphine c) leukostriene d)prostaglandins	1	5	L3		5

PLEASE WRITE THE QUESTIONS OF PART B AND C ON YOUR ANSWER SHEET AND SUBMIT THE MCQS TO THE TEACHER

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Part B Answer the Following   3 x 8 Marks = 24 Marks

Q. No.	Questions	Marks	CO	BL	Marks Scored	PO(s)/ PSO
12. a	Write on the different structure databases available	8	3	L1		
	OR					
12. b	List the steps of translation and explain the termination step in detail	8	3	L1		
13. a	Explain different disorders related to nervous system	8	4	L2		
	OR					
13. b	Explain the methods of supervised learning		4	L2		
14. a	Explain different types of immune cells with description	8	5	L3		
	OR					
14. b	Differentiate innate and acquired immunity	8	5	L3		

Part C Answer the Following   1 x 15 Marks = 15 Marks

Q. No.	Questions	Marks	CO	BL	Marks Scored	PO(s)/ PSO
15	Display how to create an artificial immune system	15	5	L4		
	OR					
16	Where a person is scared his / her heartbeat is faster, while sleeping the heartbeat is slower. Do you control how your heart beats? Explain?	15	4	L4		

Attainment Level (H:76 to 100%; M :50 to 75%; L: ≤ 50%)

CO	Quality	Max Marks	Marks Scored	% of Marks	Attainment H/M/L
	L1 & L2 = 20 Marks	50			
	L3 & L4 = 30Marks				
POs/PSOs:					

- L1- Remember, L2-Understand, L3-Apply, L4-Analyse