

Paper: BI-521 Concepts in Molecular Biology & r-DNA Technology

CO1 Students will interpret about the concept of computer algorithms

T1 Differentiate between Computer algorithm and pseudocode

A1 Write an algorithm to compare two protein sequences

Marks	Roll No	Test1	Test2	Total marks of attempted		Percentage	Score (3,2,1)	Target >= 60% (Y/N)
				questions	Marks			
			10	10	20	20		
	25101		9	8	17	20	85	3 Y
	25103		9	7	16	20	80	3 Y
	25104		7	8	15	20	75	3 Y
	25105		7	7	14	20	70	3 Y
	25106		8	9	17	20	85	3 Y
							Average	3

%age	score
>=60	3
50-59.9	2
40-49.0	1

CO2 Students will be able to distinguish between different algorithms such as divide and rule, genetic algorithms, machine learning etc.

A1 Write different types algorithms along with their salient features and specific applications in general

A2 Search from the internet and list softwares based on Dynamics Programming, Genetic Algorithms, Decision Tree, Neural Networks, SVM etc.

Marks	Roll No	Assignment1	Assignment2	Total marks of attempted		Percentage	Score (3,2,1)	Target
				questions	Marks			
			10	10	20	20		
	25101		9	9	18	20	90	3 Y
	25103		8	6	14	20	70	3 Y
	25104		8	9	17	20	85	3 Y
	25105		6	6	12	20	60	3 Y
	25106		9	8	17	20	85	3 Y
							Average	3

CO3 Students will be able to apply these algorithms to analyze biological data

A1 Write a case study of HMMER Package to analyze Biological data using HMM

A2 Write detailed flowchar of PHD secondary structure prediction algorithm

Marks	Roll No	Assignment1	Assignment2	Total marks of attempted		Percentage	Score (3,2,1)	Target
				questions	Marks			
			10	10		20		

25101	9	9	18	20	90	3 Y
25103	9	8	17	20	85	3 N
25104	8	7	15	20	75	3 Y
25105	6	5	11	20	55	2 N
25106	8	9	17	20	85	3 Y

Average	2.8
----------------	------------

CO4 Students will be able to choose right algorithm for a specific type of data

GD1 Group discussion on choosing the right algorithm for specific biological application

		Total marks of attempted questions		Total Marks	Percentage	Score (3,2,1)	Target
Marks	Roll No	GD1					
			10		10		
	25101		8	8	10	80	3 Y
	25103		7	7	10	70	3 N
	25104		7	7	10	70	3 Y
	25105		5	5	10	50	2 N
	25106		7	7	10	70	3 Y
				Average		2.8	