

**Paper: BI-515 and BI517 Introduction to Bioinformatics & Biological Databases**

**CO1** Students will be able to distinguish between various types of biological data

**T1** Write a short note on Proteins, Lipids, Carbohydrates, Nucleic Acids

**A1** Write any five biological experiments and their outputs

	Roll No	Test1	Assignment1	Total marks of attempted questions	Total Marks	Percentage	Score (3,2,1)	Target >= 60% (Y/N)
Marks			10	10	20	20		
		25101	9	9	18	20	90	3 Y
		25103	6	6	12	20	60	3 Y
		25104	8	9	17	20	85	3 Y
		25105	9	10	19	20	95	3 Y
		25106	9	9	18	20	90	3 Y
		<b>Average</b>						<b>3</b>

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

**CO2** Students will be able to experiment with biological data mining using various databases

**PA1** Retrieve publications from PUBMED with title containing the term "Lung Cancer, published between between 2015 and 2018

**PA2** Search an experimental 3D structure for Wheat Cyclophilin and download its sequence and 3D structure

	Roll No	Practical Assignment1	Practical Assignment2	Total marks of attempted questions	Total Marks	Percentage	Score (3,2,1)	Target
Marks			10	10	20	20		
		25101	10	9	19	20	95	3 Y
		25103	8	8	16	20	80	3 Y
		25104	8	9	17	20	85	3 Y
		25105	8	9	17	20	85	3 Y
		25106	9		9	10	90	3 Y
	<b>Average</b>						<b>3</b>	

**CO3** Students will be able to classify various Bioinformatics databases

**A1** List various primary, secondary and specialized data bases

**Q2** Identify the type of database from the given list of databases

	Roll No	Assignment1	Q1	Total marks of attempted questions	Total Marks	Percentage	Score (3,2,1)	Target
Marks			10	5		15		
	25101	9		5	14	15	93.33333333	3 Y
	25103	9		4	13	15	86.66666667	3 Y
	25104	8		5	13	15	86.66666667	3 Y
	25105	7		4	11	15	73.33333333	3 Y
	25106	9		5	14	15	93.33333333	3 Y
							<b>Average</b>	<b>3</b>

**CO4** Students will be able to know various database retrieval and deposition systems work

**A1** Differentiate between SRS and ENTREZ

**A2** Write short notes on Bankit, Seqin, Webin

	Roll No	Assignment1	Assignment2	Total marks of attempted questions	Total Marks	Percentage	Score (3,2,1)	Target
Marks			10	10		20		
	25101	9		9	18	20	90	3 Y
	25103	9		9	18	20	90	2 N
	25104	8		8	16	20	80	3 Y
	25105	5		6	11	20	55	2 N
	25106	9		9	18	20	90	3 Y
							<b>Average</b>	<b>2.6</b>

**CO5** Students will differentiate between various formats of biological data and know which format is suitable for a particular application.

**CA1** On the given sheet match the important features with the respective format

**A1** Explain various sections of the PDB format

	Roll No	Class Activity 1	Assignment1	Total marks of attempted questions	Total Marks	Percentage	Score (3,2,1)	Target
Marks			10	10		20		
	25101	9		10	19	20	95	3 Y

25103	10	9	19	20	95	3 Y
25104	10	9	19	20	95	3 Y
25105	8	7	15	20	75	3 Y
25106	9	9	18	20	90	3 Y
					<b>Average</b>	<b>3</b>