C.U.SHAH UNIVERSITY Summer Examination-2016

Subject Name: Bioinformatics/Biostatistics

	Subject	Code: 4LS04BOT1/4SC04BIB1	Branch: B.Sc.(Micro,Biotec	h)	
	Semester	r: 4 Date: 05/05/2016	Time: 02:30 To 05:30	Marks: 70	
	Instructio	ons:			
	(1) Use of Programmable calculator & any other electronic instrument is prohibited.				
	(2) Instructions written on main answer book are strictly to be obeyed.				
		Draw neat diagrams and figures (if ne	cessary) at right places.		
	(4) A	Assume suitable data if needed.			
Q-1	-	Attempt the following questions:		(14)	
	a)	Define Bioinformatics.		1	
	a) b)	What is MIPS?		1	
	c)	What are different forms of seconda	ry structure?	1	
	d)	What is use of Pfam in Protein struc		1	
	e)	What is line graph?	······ F·······	1	
	f)	What are types of Variables?		1	
	g)	Define Biostatistics.		1	
	h)	In which year human genome was s	equenced?	1	
	i)	What is Central dogma of life?		1	
	j)	What are stop codons?		1	
	k)	What is alignment?		1	
	l)	What is dendogram?		1	
		In which form of protein structure is	s superimposed?	1	
• • •	n)	Define BLAST.		1	
Atte	empt any i	Cour questions from Q-2 to Q-8			
Q-2		Attempt all questions		(14)	
-	a)	What is bioinformatics? Write abou	t Areas, scope and applications of		
		bioinformatics.			
	b)	Enlist various databases of proteins	and describe.		
Q-3	5	Attempt all questions		(14)	
÷		Write a note on Secondary database	S.	· · ·	
Q-4	Ļ	Attempt all questions		(14)	
۰.	a)	Explain in detail about Primary, Sec diagram.	condary and tertiary structure of pro		

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Q-5		Attempt all questions	(14)	
	a)	Explain Needleman and Wunch algorithm		
	b)	Explain Smith and waterman algorithm		
Q-6		Attempt all questions	(14)	
	a)	Write a note on GenBank and explain general format followed by genbank.		
	b)	Write a note on Phylogenetic analysis methods.		
Q-7		Attempt all questions	(14)	
	a)	Explain all Primary databases of DNA.		
	b)	Explain comparison of two sequences in detail.		
Q-8		Attempt all questions	(14)	
-	a)	What is t-test and chi-test? Explain briefly.		
	b)	Write a note on various secondary databases and their primary sources.		
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