

Roll No: _____

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B.Sc. (Hons) Biochemistry, Semester-IV Examination, 2023
Paper Title: Introduction to Biological Data Analysis
Paper Code: BBC/BBT/BCH/BTX GE 04

Time: 3 hours

Max Marks: 75

Note: This paper has 3 Sections, A, B, and C. Attempt all three sections. Section A: Answer all the questions; Section B: Answer any one; Section C: Answer all the questions, each question in this section has an internal choice

Abbreviations Used:

CO- Course Outcome, PO- Program Outcome, BTL- Bloom Taxonomy Level: BT level 1- Remember; BT level 2-Understand; BT level 3-Apply; BT level 4-Analyse; BT level 5-Evaluate, BT level 6-Create

Section A (Attempt all questions)

(1x15=15 Marks)

Q. No	Questions	BTL	CLO	PLO
i.	Linux is a programming language	1	2	3
ii.	If a = "Bio" then len(a) will give 4 as an output.	3	2	3
iii.	If a = 7.0 then type(a) will give int as an output.	4	5	2
iv.	In Linux, cat >>bio will overwrite the file.	1	4	3
v.	In Linux touch bio will create a new file named as bio.	3	3	2
vi.	In python "print" is a user defined function.	5	4	3
vii.	In Python, a file can be opened in a read mode only.	4	4	3
viii.	Python is a object oriented programming language	4	4	3
ix.	In Python, set can't hold duplicate items.	2	2	3
x.	If a = "bio" then a*2 will print biobio.	2	2	3
xi.	In Python, functions can be used to eliminate repetitive codes.	5	4	3
xii.	In Python, a variable name can start with number.	4	4	3
xiii.	In Python, input() function allows to get data from the user.	4	4	3
xiv.	In Linux, piping can be used to integrate the results of two different commands.	2	2	3
xv.	In Python, for loop can be used to iterate over the elements in a string.	2	2	3

Section B: Long type Questions (Attempt any two out of four)

(2x15=30 Marks)

Q. No	Questions	BTL	CLO	PLO
a)	Briefly describe various data types in Python	5	2	3
b)	What do you understand by cat, touch, and sort commands in Linux? Explain using suitable examples.	4	3	2

c)	What are user-defined functions in Python. Explain the syntax with suitable examples.	4	2	3
d)	Briefly describe conditional statements in Python with suitable examples.	3	1	2

Section C: Short-type Questions (Attempt all questions, each question has an internal choice)
(6x5=30 Marks)

Q. No	Questions	BTL	CLO	PLO
a)	Briefly describe the structure of Unix system. OR Briefly describe the functions of an operating system.	3	5	3
b)	Write a short note on the unix file system. OR Write a short note on grep and awk commands in unix. Give proper examples.	4	2	3
c)	Write a short note on reading and writing files in Python. Give a suitable example for this. OR Write a function that takes a DNA sequence from the user and prints its length.	4	3	2
d)	List1 = ["DNA", "RNA", "Protein"] Insert only those elements in a new list that starts with "P". OR Calculate the length of each element and add "molecule" at the start of each element.	3	2	3
e)	Define higher order functions? Give four examples of higher order functions. Explain any two higher order functions with suitable examples. OR Write a short note on exception handling in Python. Explain the syntax of exception handling with suitable example.	5	2	3
f)	Write a short note on object-oriented programming in Python. OR Write a short note on organizing and sharing code in Python.	2	2	3

END OF THE QUESTION PAPER