



Avinashilingam Institute for Home Science and Higher Education for Women
(Deemed to be University Estd. u/s 3 of UGC Act 1956, Category 'A' by MHRD) Re-
accredited with 'A+' Grade by NAAC. Recognised by UGC Under Section 12B
Coimbatore - 641 043, Tamil Nadu, India

Continuous Internal Assessment II, April 2025
Semester II

Class : I PG
Major : Bioinformatics

Time : 2 Hrs
Max. Marks : 60

23MBIC08 Perl and Python

COURSE OUTCOMES: Students will be able to

CO1: develop Perl scripts for demonstrating data manipulations

CO2: develop substantial Python scripts using data structure for representing biological data.

CO3: to think and write regular expressions in perl and python to solve scientific problems

CO4: Understand and explain the fundamental concepts of the foundations of Python and Perl their role in data science and big data

CO5: develop and use BioPerl and BioPython modules for tackling challenges, analyze and interpret biological data.

Part A- Answer all questions

(6 x 1 = 6)

1. Find the invalid variable among the following: CO4:K2
a. 1st_string b. my_string_1 c. _ d. foo
2. In Python, find which one isn't an exception handling keyword. CO2:K1
a. accept b. finally c. try d. except
3. Which one of the following is not python's predefined data type? CO2:K1
a. list b. dictionary c. tuple d. class
4. Which is the special symbol used in python to add comments? CO4:K1
a. \$ b. // c. /*.... */ d. #
5. Which of the following module in biopython is used to manipulate the string? CO5:K3
a. Seq.Mani b. Bio.Seq c. Bio.Str d. Bio.blast
6. What is the result of cmp(3,1) in python? CO3:K1
a. True b. False c. 0 d. 1

Part B

(3 x 6 = 18)

Answer the following.

Answers should not exceed 200 words or one page

7. (a). Write a program in python to find the restriction site in a given sequence. CO3K4
(Or)
7. (b) Write a program in python to find whether the given number is +ve, -ve or zero. CO3:K3
8. (a) Write a program to find the Fibonacci series for 1 to 10. CO4:K4
(Or)
8. (b) Discuss the string manipulation functions in python. CO4:K1
9. (a) Explain briefly on the bioperl modules. CO5:K1
(Or)
9. (b) Write a note on application of biopython modules CO5:K1

Part C

(3 x 12 = 36)

Answer the following not exceeding 700 words or four pages

10. (a) Explain the exception handling in python. CO2:K1
(Or)
10. (b) Write a program to count the nucleotide using count function of python. CO2:K3
11. (a) Write the usage of regular expression in python. CO3:K2
(Or)
11. (b) Write a program in python to copy the content of one file to another. CO3:K4
12. (a) Write a program to fetch the nucleotide sequence from database using BioPerl. CO5K3
(Or)
12. (b) Write a program to perform the Blast using BioPython CO5K3

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