Avinashilingam Institute for Home Science and Higher Education for Women

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

Master's Degree Examination – June / July 2021
II Semester

Class: I PG **Time : 3 Hours**
Major: Bioinformatics **Max Marks : 100**

20MBIC07 Perl and Python

Part- A **10X1=10**

Choose the Correct Answer

1. Judge type of data type is supported in Perl.
   a. Scalar b. Array c. Hashes d. All of the above K5

2. Identify of the following method pops off and returns the last value of the array?
   a. push @ARRAY, LIST b. pop @ARRAY
   c. shift @ARRAY d. unshift @ARRAY, LIST K1

3. Select will you delete a key/value pair to a hash?
   a. Using simple assignment b. using delete function
   c. using insert. d. None of the above. K1

4. Identify of the following function disassociate the filehandle from the corresponding file?
   a. close b. unlink c. seek d. open. K1

5. Predict type of data type is given below ?
   L = [1, 23, 'hello', 1]
   a. List b. Dictionary c. Tuple d. Array K2

6. Analyze of the following statement(s) is TRUE?
   1. A hash function takes a message of arbitrary length and generates a fixed length code.
   2. A hash function takes a message of fixed length and generates a code of variable length.
   3. A hash function may give the same hash value for distinct messages.
   a. I only b. II and III only c. I and III only d. II only K4

7. Give the output of the following program:

```
D = dict()
for x in enumerate(range(2)):
        D[x[0]] = x[1]
        D[x[1]+7] = x[0]
print(D)
```

   a. {0: 1, 7: 0, 1: 1, 8: 0} b. {1: 1, 7: 2, 0: 1, 8: 1}
   c. {0: 0, 7: 0, 1: 1, 8: 1} d. KeyError K2

8. Which of the following function convert a string to a float in python?
   a. int(x [,base]) b. long(x [,base])
   c. float(x) d. str(x) K2

9. Bioperl has played an integral role in the _____.
   a. Genetics b. Chimpanzee genome project
   c. Human Genome Project c. DNA K1

10. Write the output of the following program :

```
i = 0
while i < 3:
print i
i++
print i+1
```

   a. 0 2 1 3 2 4 b. 0 1 2 3 4 5 c. Error d. 1 0 2 4 3 5 K3

Part- B **5X6=30**

Answer all questions

Each answer should not exceed 400 words or two pages

11.a. Explain input and output operations in perl. K3

(or)

11.b. Describe about lists and array in perl. K1

12.a. Discuss about subroutine. K2

(or)

12.b. Define packages. Explain about packages and modules. K1

13.a. Explain various types of string processing in python. K3

(or)

13.b. Distinguish between list, tuples and dictionaries. K4

14.a. Explain regular expression in python and give suitable example. K3

(or)

14.b. Define debugging. Explain. K1

15.a. Constructa module for gene expression using bioperl. K3

(or)

15.b. Develop a protein sequence using biopython. K3

Part- C **12X5=60**

Answer all Questions

Each answer should not exceed 800 words or four pages

16.a. Discuss in detail about control structure in perl. K2

(or)

16.b. Describe in detail about scalar data and operators. K1

17.a. Illustrate File handling in perl with example. K2

(or)

17.b. Explain regular expression in perl with example. K3

18.a. Describe in detail about datatypes in python. K1

(or)

18.b. Illustrate control structure in python. K2

19.a. Discuss in detail about exception handling in python. K2

(or)

19.b. Explain in detail about Functions and Modules in python. K3

20.a. Develop a simple program for store, retrieve, and translate genetic instruction using python. K2

(or)

20.b. Construct a program to convert the DNA sequence into Protein using perl. K3

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