

Dr. Narendar Kumar

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
T-3 EXAMINATION, May 2019
B.Tech. (Bioinformatics) IV Semester

COURSE CODE:15B11BI421

MAX MARKS: 35

COURSE NAME:Programming Languages for Bioinformatics

MAX. TIME: 2Hrs.

Note: All questions are compulsory. Attempt all questions of a particular section at one place.
Answer each question to the point.

1. Write code for creating a python class "AMINOACID" that stores "amino acid name" and its "molecular weight". Include a method "report" in the class for printing a message that reports the molecular weight of the amino acid. Write the code for creating an object of class AMINOACID. Write the code for calling "report" method on the object created. (5 marks) (CO5)
2. Write the syntax and an example of the use of following functions in python re module. (5 marks) (CO4,6)
 - a. re.match
 - b. re.search
 - c. re.findall
 - d. re.sub
 - e. re.compile
3. Write short note with example on the following python function / method / statements. (5 marks) (CO4,6)
 - a. zip
 - b. enumerate
 - c. .items
 - d. .append
 - e. .extend
4. Write the output of following statements in python3. Assume re module has already been imported. (5 marks) (CO6)
 - a. re.findall(r'TATA', "TTATATATACATAT")
 - b. re.sub(r'AT..', "TAGG", "TTATATATACATAT")
 - c. re.split(r'[AT]', "GCGCACTGCG")
 - d. "Who" in "Whosename is longest of all"
 - e. list(map(lambda x : x * x , list(range(5))))
5. Write a python function that accepts a variable number of string arguments and returns a single string made by joining all of them. (5 marks) (CO4,5)
6. Write a perl subroutine that returns the sum, mean and maximum of a given list of numbers. (5 marks) (CO2,3)
7. Write the syntax and use of while loop in perl with an appropriate example. Show the use of "last" and "next" statements in the loop. (5 marks) (CO3)