

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATIONS- 2024

B.Tech-IV Semester (BT/BI)

COURSE CODE (CREDITS): 18B11BI414 (3)

MAX. MARKS: 35

COURSE NAME: Programming Languages for Bioinformatics

COURSE INSTRUCTORS: Dr. Shikha Mittal

MAX. TIME: 2 Hours

Note: (a) All questions are compulsory.

(b) Marks are indicated against each question in square brackets.

(c) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

Q1. What is the significance of use strict; and use warnings; in Perl? [CO-3] (2 marks)

Q2. What is the difference between hash and array? Demonstrate with a suitable example. [CO-2 & CO-3] (3 marks)

Q3. Write a Perl script that checks if a number is positive, negative, or zero, and prints an appropriate message. [CO-1 & CO-3] (3 marks)

Q4. What would be the output for the following Perl snippet: [CO-3 & CO-5] (8 marks)

- a) `@a = ('ATG','TGC','GCA','CAT','CCG')`
- b) `print "\n@a"; print @a[2];`
- c) `$str = "Perl Programming";`
- d) `$var = substr($str, 0, -3); print $var;`

Q5. Write one example each for string splitting and string joining using perl. [CO-2] (3 marks)

Q6. Explain the concept of subroutines and in Perl. How are they created and used? [CO-2] (4 marks)

Q7. Write Perl script – [CO-1 & CO-5] (6 marks)

- i. To find and replace all occurrences of the word "foo" with "bar" in a given string
- ii. To create an array reference, add some elements to the array, and then print the elements.

Q8. Briefly explain – [CO-1, CO-4 & CO-6] (6 marks)

- i. What is the purpose of the binmode() function in Perl file handling?
- ii. How do you read, write and append from a file in Perl
- iii. Typecasting in python