

**JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT**

**TEST -2 EXAMINATION- APRIL-2023**

**COURSE CODE(CREDITS): 18B11BI414**

**MAX. MARKS: 25**

**COURSE NAME: Programming Languages for Bioinformatics**

**COURSE INSTRUCTORS: Dr. Shikha Mittal**

**MAX. TIME: 1 Hour 30 Minutes**

*Note: All questions are compulsory. Marks are indicated against each question in square brackets.*

**Q1. Suppose an array contains – (2 marks) [CO-1]**

`@arraycontent=('ab', 'cd', 'ef', 'gh');`

How to print all the contents of the given array?

**Q2. Where do we require 'chomp' and what does it mean? (2 marks) [CO-3]**

**Q3. List the operator used in Perl? (3 marks) [CO-1 & CO-2]**

**Q4. In Perl, what is grep function used for? What is the syntax used in Perl grep function? (3 marks) [CO-2]**

**Q5. How to open and read data files with Perl. (3 marks) [CO-1 & CO-3]**

**Q6. Explain the following - (6 marks) [CO-1, CO-2 & CO-3]**

(a) How do I replace every <TAB> character in a file with a comma? (3 marks)

(b) How do you find the length of an array?

(c) Difference between for and foreach.

**Q7. What will be the output of this program – (2 marks) [CO-1]**

```
%rateof = ('Mango' => 45, 'Orange' => 30, 'Grapes' => 40);  
print "$rateof{'Mango'}\n";  
print "$rateof{'Orange'}\n";  
print "$rateof{'Grapes'}\n";
```

**Q8. Define arrays. Explain in detail push(), pop(), shift() and unshift() functions in perl with examples. (4 marks) [CO-3]**