JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATION- 2024

B.Tech-V Semester (BT/BI)

COURSE CODE (CREDITS): 18B11BI512 (3)　　　　　　　MAX. MARKS: 35

COURSE NAME: Scripting Languages for Bioinformatics

COURSE INSTRUCTOR: Dr. Tiratha Raj Singh　　　　　　MAX. TIME: 2 Hours

Note: (a) All questions are compulsory.

　　　　(b) The candidate is allowed to make Suitable numeric assumptions wherever required

　　　　　for solving problems

Q.No	Question	CO	Marks
Q1	Explain the difference between include and require in PHP. Write a code to prove your statement.	CO:4,5	2
Q2	What is the purpose of the $_GET and $_POST super-globals in PHP? Provide example codes for the demonstration of these super-globals. Provide a comparative difference between these two.	CO:2,3	3
Q3	What are cookies in PHP? How can you create a cookie in PHP? Write a code snippet to create and retrieve a cookie.	CO-5	2
Q4	What are the differences between =, == and === operators in PHP? Provide implementation codes to illustrate your answer.	CO:2-3	2
Q5	Write a PHP script to check if a number is odd or even.	CO:2	2
Q6	Write a PHP script to connect to a MySQL database and display the contents of a table called students with columns roll_no, name, course and age.	CO:3-5	4
Q7	Design a data entry form through HTML. Connect the designed from through PHP that accepts a user's name and email address. Validate the input and display a success message if the data is valid.	CO:1-4	4
Q8	Develop a PHP-based Bioinformatics application that performs following operations for data analysis: (i) Basic arithmetic operations (addition, subtraction, multiplication, division). The user should input two numbers and select the desired operation from a dropdown. Display the result on the same page after form submission. (ii) Base composition analysis for a given nucleotide sequence. If this sequence was a protein coding sequence, then calculate its codons and display the total number of codons in the sequence.	CO:3-5	5 (2+3)
Q9	What is CSS? How it can be used to improve the web development process? What are its types?	CO:3-4	3

Q10	(i) WAP in PHP to combine the arrays [1, 2, 3] and [4, 5, 6] into one array. (ii) WAP in PHP to implement regular expressions where clear demonstration for quantifiers and character classes should be visible. (iii) WAP in PHP to implement any 2 string-based functions.	CO:3-4	4 (1+2+1)
Q11	Write code for only four functions exclusively, to be connected with the following GUI where, when user clicks the button, it will do the action as written in button value and displays appropriate message below the interface: **Date and Time Functions in JavaScript** Click the buttons to see the date and time functionalities. Show Current Date Show Current Time Days Until New Year Show Formatted Date	CO:2-4	4 (1*4)