

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATIONS- 2026

B.Tech-IV Semester (BT/BI)

COURSE CODE (CREDITS): 25B11BT411(3)

MAX MARKS: 35

COURSE NAME: Python for Bioinformatics

COURSE INSTRUCTOR: Dr. Shikha Mittal

MAX. TIME: 1 Hours

Note: (a) All questions are compulsory.

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

(c) Use of calculator is not allowed

Q.No	Question	CO	Marks
Q1	Given a biological dataset, using python: a. Extract accession numbers b. Validate protein sequences c. Remove unwanted characters	IV	(6)
Q2	Write the output of the following codes- a. <code>x = [10, 20, 30]</code> <code>print(x[-1])</code> b. <code>def f(x=[]):</code> <code>x.append(1)</code> <code>print(x)</code> <code>f()</code> c. <code>import re</code> <code>print(bool(re.match(r'\d+', "123abc")))</code>	III	(6)
Q3	a. What are mutable and immutable objects? Give examples b. Explain built-in vs user-defined modules. c. Differentiate between match(), search(), and findall(). d. Difference between print() and return. e. Comparison operators in perl for strings	III, V	(10)
Q4	a. Write a Python program to extract all email IDs from a text. b. Write a Python script to parse a FASTA file and extract sequence IDs.	IV	(4)
Q5	Write SQL queries to: a. Find top 3 students b. Calculate average marks c. Find failing students	V	(3)
Q6	What is exception handling. Difference between except Exception and specific exceptions.	II	(3)
Q7	a. Chomp function in perl	V	(3)

	b. Difference between for and while loop in perl		
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JUIT TEST-3 EXAMINATIONS- MAY-2026