

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -I EXAMINATION- 2025

B.Tech-III Semester (BT/BI)

COURSE CODE (CREDITS): 25B11BI312 (3)

MAX. MARKS: 15

COURSE NAME: Bioinformatics data management

COURSE INSTRUCTORS: Dr. Shikha Mittal

MAX. TIME: 1 Hour

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	What are the problems in file system data management? Explain in detail with relevant example.	CO-I	(03)																				
Q2	Describe about various keys in relational model. Explain in detail.	CO-I	(03)																				
Q3.	Consider the following table: <table><tr><th>SID</th><th>Name</th><th>Age</th><th>Major</th></tr><tr><td>101</td><td>Alice</td><td>20</td><td>CS</td></tr><tr><td>102</td><td>Bob</td><td>21</td><td>Math</td></tr><tr><td>103</td><td>Carol</td><td>22</td><td>CS</td></tr><tr><td>104</td><td>Dave</td><td>23</td><td>Physics</td></tr></table> <p>a) Find the names of all students majoring in CS. b) Find all students who are older than 21 years. c) List all student IDs and their majors.</p>	SID	Name	Age	Major	101	Alice	20	CS	102	Bob	21	Math	103	Carol	22	CS	104	Dave	23	Physics	CO-I& CO-II	(03)
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103	Carol	22	CS																				
104	Dave	23	Physics																				
Q4.	Explain the following – a) DDL and DML b) Integrity Constraints c) Data Independence	CO-I& CO-II	(06)																				