

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2026

B.Tech-V Semester (BT/BI)

COURSE CODE (CREDITS): 25B1WBI533 (3)

MAX. MARKS: 15

COURSE NAME: DATA WARE HOUSING & MINING FOR BIOINFORMATICS

COURSE INSTRUCTOR: Dr. Rakesh Kanji

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

(c) Use of calculator is not allowed

Q.No	Question	CO	Marks																																													
Q1	(i)Write down the properties of Data warehouse. (ii) Draw a 3d based Data warehouse with proper each dimensional tagging and cells value.	1	2+1																																													
Q2	(i)Develop a snowflake schema with product, region, time and sells as dimension and Fact table respectively. (ii)Write down the pros and cons of Starflake schema.	1	1.5+1.5																																													
Q3	<table><tr><th>Year</th><th>Location</th><th>Product</th><th>Customer</th><th>Total Sales</th></tr><tr><td>2022</td><td>Delhi</td><td>Laptop</td><td>C001</td><td>125,000</td></tr><tr><td>2022</td><td>Mumbai</td><td>Mobile</td><td>C002</td><td>85,000</td></tr><tr><td>2022</td><td>Delhi</td><td>Tablet</td><td>C003</td><td>42,000</td></tr><tr><td>2023</td><td>Delhi</td><td>Laptop</td><td>C001</td><td>150,000</td></tr><tr><td>2023</td><td>Mumbai</td><td>Mobile</td><td>C002</td><td>95,000</td></tr><tr><td>2023</td><td>Chennai</td><td>Laptop</td><td>C004</td><td>110,000</td></tr><tr><td>2024</td><td>Delhi</td><td>Mobile</td><td>C001</td><td>72,000</td></tr><tr><td>2024</td><td>Chennai</td><td>Tablet</td><td>C003</td><td>55,000</td></tr></table> (i) Produce the resultant table under the Dice (location='Delhi' or 'Mumbai' AND Product ='laptop') intersection with Slice (location='Delhi'). (ii) Which are the dimensions will be preferred to store the given table data in linearly ordered contiguous fashion as per the OLAP query present in Q3 (i). (iii) Provide the business query for Roll up and Drill down just as statement. No need to give any technical syntax.	Year	Location	Product	Customer	Total Sales	2022	Delhi	Laptop	C001	125,000	2022	Mumbai	Mobile	C002	85,000	2022	Delhi	Tablet	C003	42,000	2023	Delhi	Laptop	C001	150,000	2023	Mumbai	Mobile	C002	95,000	2023	Chennai	Laptop	C004	110,000	2024	Delhi	Mobile	C001	72,000	2024	Chennai	Tablet	C003	55,000	1	1+1+1
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Q4	Assume the Data warehouse cube (x,y,z) as 16*8*8 and each page is having 8 elements as picked up by x axis based linearly ordered contiguous. (i)What is the number of page required to fetch to fulfill x-z and y-z slice? (ii) Explain chunking concept to remove the problem of pre	1	2+1																																													

	determined order or linearly ordered contiguous fashion based cells selection.		
Q5	(i) Explain the methodology of using Decision tree with a diagram. (ii) Discuss the remedy provided by C4.5 as splitinfo for the problem of unusual information gain.	2	2+1

JUIT TEST-1 EXAMINATION- AUG-2026