

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2026

B.Tech-I Semester (CSE/IT)

COURSE CODE (CREDITS): 20B1WCI531

MAX. MARKS: 15

COURSE NAME: Foundation for Data Science and Visualization

COURSE INSTRUCTOR: MSI

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	A data scientist needs to collect data, clean it, perform statistical analysis, build ML models, and visualize the results. Identify suitable tools/technologies for any three of these tasks and justify your choices.	1	3
Q2	Consider a scenario where an e-commerce company wants to predict customer churn . Explain how the Data Science Lifecycle can be applied to this problem. Mention any three important stages in the lifecycle.	1	3
Q3	A hospital wants to use patient data to predict the risk of disease and improve treatment decisions . Explain how Data Science can be applied in this scenario. Also mention two other real-world applications of Data Science.	1	3
Q4	Consider the following Python code: data = [10, 20, 10, 30, 20, 40] Write Python statements to: 1. Remove duplicate values from data. 2. Sort the resulting values in descending order. 3. Find the maximum value.	2	3
Q5	Consider the following R vector: marks <- c(65, 82, 75, 90, 58, 88) Write R statements to: 1. Find the mean of marks. 2. Display marks greater than 75. 3. Count the number of students who scored greater than 75.	2	3