

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION - 2025

B.Tech. -VI Semester (CSE/IT)

COURSE CODE (CREDITS): 19B1WCI637 (2)

MAX. MARKS: 15

COURSE NAME: Statistics and Exploratory Data Analytics

COURSE INSTRUCTORS: Meghna Dhalaria

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 is Principal Component Analysis? Describe its geometrical interpretation and how it transforms data in a high-dimensional space.	CO3	[4]
Q2.	a) Given the attribute "age" with the following values in increasing order: 13, 15, 16, 16, 19, 20, 20, 21, 22, 22, 25, 25, 25, 25, 30, 33, 33, 35, 35, 35, 35, 36, 40, 45, 46, 52, 70. Draw its box plot.	CO2	[3]
	b) Explain the Central Limit Theorem. Why is it important in statistics?	CO1	[2]
Q3.	a) Calculate the percentile value for the value 60 in a given population of weights of persons 50, 55, 40, 60, 100, 95, 90, 60, 80, 75.	CO1	[2]
	b) Given the following dataset: 22, 25, 29, 11, 14, 18, 13, 13, 17, 11, 8, 8, 7, 12, 15, 6, 8, 7, 9, 12. How would you calculate the 20% trimmed mean for this dataset?		[2]
	c) How would you identify and differentiate between discrete data, continuous data, nominal data, and ordinal data in a given dataset?		[2]