Guru Nanak Dev Engineering College, Ludhiana

Department of Information Technology

Program	B.Tech.(IT)	**Semester**	4
Subject Code	BSIT-101	**Subject Title**	Probability and Statistics
Mid Semester Test (MST) No.	1	**Course Coordinator(s)**	Rupinder Kaur
Max. Marks	24	**Time Duration**	1 hour 30 minutes
Date of MST	13th Feb, 2024	**Roll Number**	

Note: Attempt all questions

Q. No.	Question	COs, RBT level	Marks
Q1	State Type I and Type II error with suitable example.	CO4, L1	2
Q2	Contrast Primary and Secondary data with four valid points of each.	CO1, L4	2
Q3	**From the following data, solve the value of median.**	CO1, L3	4
Q4	Determine first four central moments from the following:	CO1, L3	4
Q5	**Investigate Karl Pearson's coefficient of skewness from the following data**	CO5, L6	4
Q6	A sample analysis of examination results of 500 students were made. It was found that 220 students had failed, 170 had secured a third class, 90 were placed in second class and 20 got a first class. Test are these figures commensurate with the general examination result which is in the ratio of 4:3:2:1 for various categories respectively? (Table value of Chi- Square for 3 d.f at 5% level of significance is 7.81)	CO4, L5	

Marks	Less than 5	Less than 10	Less than 15	Less than 20	Less than 25	Less than 30	Less than 35	Less than 40	Less than 45
No of students	29	224	465	582	634	644	650	653	655

Sales	40-50	50-60	60-70	70-80	80-90
No of companies	10	25	30	23	12

Profit (Rs. Lakhs)	70-80	80-90	90-100	100-110	110-120	120-130	130-140	140-150
No of Cos	12	18	35	42	50	45	30	8

Course Outcomes (CO)

Students will be able to

1	Demonstrate the measures of central tendency to analyze the given data set
2	Create the histogram for a given data set