BACHELOR OF COMPUTER APPLICATIONS (BCA) (REVISED)
Term-End Practical Examination
June, 2025

BCSL-044(Set-II) : STATISTICAL TECHNIQUES LAB

Time : 1 Hour　　　　　*Maximum Marks : 50*

Note : *(i)　There are two compulsory questions in this paper of 20 marks each. Rest 10 marks are for viva-voce.*

　　(ii)　Use any spreadsheet package for solving the problem. For programming (if asked) you may use any C/C++ compiler.

1. Following data shows the average expenses on books by 20 households :

Expenses on Books (in ₹ per month)

250	700	600	1,000
5,000	100	900	800
1,200	1,300	100	400
500	1,500	750	850
950	1,150	1,250	1,200

Perform the following tasks for the data given above :

(a) Enter the data in a spreadsheet software and create a frequency distribution of this data in 5 equal intervals. Use array formula for finding the frequency distribution.   8

(b) Draw histogram of the data and find if there is any outlier in data.   4

(c) Find the mean and variance of the data.   4

(d) Find the minimum and maximum values in the data using spreadsheet formula/functions.   4

2. The following table shows the data collected in a study which is trying to determine relationship between the higher education and income category :   20

Income Category / Education	Low Income (₹)	Medium Income (₹)	High Income (₹)	Total
Only upto 12th	400	300	100	800
Graduation	500	800	300	1,600
Post-Graduation	200	500	900	1,600
Total	1,100	1,600	1,300	4,000

Use Chi-square test to verify the statement "Higher education is related to income category." Explain your results. Clearly write the null and alternative hypotheses. Make suitable assumptions, if any.

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