BACHELOR OF COMPUTER APPLICATIONS (BCAOL)

(Revised Syllabus)

BCA(Revised Syllabus)/ASSIGN/SEMESTER-IV

ASSIGNMENTS

(July – 2025 & January – 2026 sessions)

(BCS-040, MCS-024, BCS-041, BCS-042,

MCSL-016, BCSL-043, BCSL-044, BCSL-045)

SCHOOL OF COMPUTER AND INFORMATION SCIENCES
INDIRA GANDHI NATIONAL OPEN UNIVERSITY
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Important Notes

1. Submit your assignments to the Coordinator of your Study Centre on or before the due date.
2. Assignment submission before due dates is compulsory to become eligible for appearing in corresponding Term End Examinations. For further details, please refer to BCA Programme Guide.
3. To become eligible for appearing the Term End Practical Examination for the lab courses, it is essential to fulfill the minimum attendance requirements as well as submission of assignments (on or before the due date). For further details, please refer to the BCA Programme Guide.

Course Code	**:**	**BCSL-044**
Course Title	**:**	**Statistical Techniques Lab**
Assignment Number	**:**	**BCA(IV)/L-044/Assignment/2025-26**
Maximum Marks	**:**	**50**
Weightage	**:**	**25%**
Last Dates for Submission	**:**	**31st October, 2025 (For July Session)**
		30th April, 2026 (For January Session)

This assignment has five questions of total of 40 marks. Rest 10 marks are for viva voce. Please go through the guidelines regarding assignments given in the programme guide for the format of presentation.

Q1. The weight of 20 students of class X in kgs in given in the following table. **(4+2+2+2 =10 marks)**

65.5	52.5	39.2	47.7	67.5
45.9	55.3	59.5	70.1	62.5
39.9	65.2	42.9	56.3	59.5
62.3	54.2	51.3	47.6	69.5

Perform the following tasks for the data given above:

(a) Enter the data in the spreadsheet package and create a frequency distribution in 8 ranges of equal interval. The frequency distribution may be created using array formula.

(b) Draw the histogram for the data.

(c) Find the mean and variance for the data using spreadsheet.

(d) Find the maximum and minimum weight using spreadsheet formula.

Q2. Consider the following data of sales of wheat by a farm house in a week:

(5 Marks)

Day	Sales (Kgs)
Monday	200
Tuesday	175
Wednesday	150
Thursday	125
Friday	250
Saturday	300
Sunday	350

Find the moving averages of length 4 and 5. Plot these moving averages using spreadsheet.

Q3. A company has the following production and sales data. **(5+ 5 = 10 marks)**

Production in (Nos)	Sales in INR
40	30,000
50	75,000
60	60,000
90	80,000
70	75,000
45	60,000
80	55,000

(a) Construct a scatter plot (diagram) for the given data using a spreadsheet package.

(b) Find the best linear regression line, assuming that sales in an independent variable and production is a dependent variable. Explain your answer.

Q4. The following table shows the data on mortality rate of plants on use of a new fertilizer. Use chi-square or any other test to determine, if the fertilizer has any effect on enhancing the living rate.

(8 marks)

Categories	Living	Dead	Total
Not given fertilizer	427	219	646
Given fertilizer	297	130	427

Explain your results.

Q5. The sugar level of 6 patients were recorded before and after taking a new drug:

(7 Marks)

Before	130	200	100	95	125	150
After	95	120	99	90	100	110

Using t-test and a significance level of 5% can you determine if the new drug causes significant reduction in sugar level. You must write H_0 and H_1 clearly and explain your results.