

**Bachelor of Computer  
Application (Revised) (BCA)  
Term-End Examination  
December, 2018**

**STATISTICAL TECHNIQUES LAB**

*Time : 1 Hour*

*Maximum Marks : 50*

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- Note :** (i) There are *two* compulsory questions of 20 marks each in this paper. Rest 10 marks are for viva-voce.
- (ii) Use any spreadsheet package for solving the problems. For programming (if asked), you may use any C/C++ compiler.
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1. Water intake of a sample of 20 patients were recorded. The data is shown in the following table :

Water intake (in litres/day)				
3.2	1.7	2.1	3.0	2.5
1.8	1.9	2.4	2.3	2.7
2.8	2.3	2.9	1.9	1.8
3.1	1.6	0.5	2.1	3.1

Perform the following tasks for the data given above : (8 + 4 + 4 + 4 = 20)

- Enter the data in a spreadsheet software and create a grouped frequency distribution in 5 equal intervals. Use array formula for finding the frequency distribution.
  - Draw the histogram of data. Is the data normally distributed ?
  - Find the mean and median of the data using spreadsheet formula.
  - List the outlier/outliers in the data, if any. Find the mean and median after removing outlier(s).
2. A study was conducted to determine, if higher education leads to managerial jobs. The following table shows this data :

Categories	Working as Manager	Not Working as Manager	Total
No Higher Education	100	700	800
Higher Education	823	377	1200
Total	923	1077	2000

Use Chi-square test to determine if higher education may lead to managerial jobs. Explain your results. Make suitable assumptions. 20