

**BACHELOR OF COMPUTER APPLICATIONS (Revised)
(BCA)**

Term-End Practical Examination

December, 2016

00003

BCSL-044(P)/S1 : 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 implementation. For programming (if asked), you may use any C/C++ compiler.*

1. The concentration of dissolved minerals were recorded in 20 samples of water. The following table shows this data :

Mineral Concentration (in ppm)				
250	290	800	715	671
125	1075	1200	300	700
995	1207	691	827	671
1210	405	607	895	670

Perform the following tasks for the data given above :

8+4+4+4=20

- (a) Enter the data in a spreadsheet and create a frequency distribution. You must create suitable ranges for this distribution. Use array formula for finding the distribution.
- (b) Draw the histogram of the data.
- (c) Find the relative frequency distribution for the frequency distribution obtained in part (a).
- (d) Find the mean and standard deviation of the data using spreadsheet formula.

2. A group of 10 students were given intensive counselling sessions in mathematics subject. The following table shows the marks out of 50 in two equivalent tests, one conducted before the counselling and the second conducted after the counselling sessions :

Marks before counselling	20	27	31	24	45	31	16	15	12	15
Marks after counselling	31	16	37	41	40	27	29	35	19	27

Using t-test with a significance level of 5%, can you say that the counselling sessions have helped the students ? Clearly write H_0 and H_1 and explain your result. Make suitable assumptions, if any.

20
