BACHELOR OF COMPUTER APPLICATIONS (Revised) (BCA)

Term-End Practical Examination

00822

December, 2017

BCSL-044(P)/S3 : 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 problems. For programming (if asked), you may use any C/C++ compiler.*

1. The household expenditure of 20 different persons in a locality were recorded. The following table shows this sample data :

Expenses (Monthly in INR)

27,000	75,000	30,000	10,000	13,000
11,000	22,000	31,000	44,000	39,000
34,000	25,000	15,000	9,000	10,000
17,000	12,000	18,000	28,000	23,000

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

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

(b) Draw the histogram of the data. Is there any outlier in the data ? Explain.

(c) Find the relative frequency distribution from the frequency distribution created in part (a).

(d) Find the mean and standard deviation of the data.

2. A group of 10 patients was tested for blood counts before and after a treatment. The following table shows their Hb level :

Hb level before treatment	Hb level after treatment
12·5	10·1
13·9	13·9
12·5	12·6
13·0	10·7
10·1	9·9
11·2	9·8
12·7	10·7
15·0	14·0
13·0	12·7
11·5	11·0

Using t-test with a significance of 5%, can you say that the treatment has resulted in reduction of Hb level in the patients. Clearly write H_0 and H_1 and explain your result. Make suitable assumptions, if any. *20*

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