

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

Term-End Practical Examination

June, 2015

BCSL-044(P)/S1 : STATISTICAL TECHNIQUES LAB

Time : 1 Hour

Maximum Marks : 50

- Note :** (i) There are **two compulsory** questions 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 average income of a family of a sample of 20 families of a village were recorded. The data is as follows :

(Average monthly family income in INR)

| | | | | |
|--------|--------|--------|--------|--------|
| 7,235 | 6,230 | 3,500 | 9,000 | 8,000 |
| 11,500 | 20,000 | 16,000 | 7,250 | 9,000 |
| 6,000 | 3,000 | 9,000 | 11,000 | 12,500 |
| 7,250 | 6,750 | 10,000 | 6,750 | 13,500 |
| 14,000 | 15,000 | 12,000 | 6,050 | 8,000 |

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 in the ranges : less than 5,000; 5,001 to 10,000; 10,001 to 15,000; 15,001 to 20,000; more than 20,000. Use array formula for finding the frequency distribution.
- (b) Draw the histogram of the data.
- (c) Find the mean and standard deviation of the data using spreadsheet formulae.
- (d) Find the minimum and maximum income using spreadsheet formulae.

2. A group of 8 candidates in the age group of 15 – 18 years were given height enhancement exercises for a few months. The following table shows their heights before and after the exercises :

| | | | | | | | | |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|
| Before (cms) | 151 | 167 | 162 | 152 | 161 | 171 | 169 | 171 |
| After (cms) | 159 | 172 | 172 | 155 | 161 | 172 | 169 | 185 |

Using t-test with a significance level of 5%, can you say that the exercises helped in significant/appreciable increase in height ? Clearly write H_0 and H_1 and explain your result. Make suitable assumptions, if any.

20
