## Bachelor of Computer

## Application (Revised) (BCA) Term-End Examination <br> December, 2018

## STATISTICAL TECHNIQUES LAB

Time: 1 Hour
Maximum Marks : 50

Note: (i) There are two compulsory questions in this paper of 20 marks each.
(ii) Rest 10 marks are for viva-voce.
(iii) Use any spreadsheet package for solving the problems.
(iv) For programming (if asked), you may use any $\mathrm{C} / \mathrm{C}++$ compiler.

1. Electricity Consumptions of several households were recorded as the following sample data :
$(8+4+4+4=20)$

| Electricity Consumption per month <br> (in units) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 250 | 500 | 1000 | 300 | 200 |
| 600 | 350 | 400 | 450 | 525 |
| 535 | 432 | 235 | 285 | 295 |
| 322 | 461 | 383 | 273 | 385 |

(a) Enter the data in a spreadsheet software and create a grouped frequency distribution in 4 equal intervals. Use array formula for finding the frequency distribution.
(b) Draw the histogram of the data and find if there is any outlier in the data.
(c) Find the mean and median of the data.
(d) Remove the outlier and once again find the mean and median. Explain the difference in the two means calculated in (c) and (d).
2. Consider the following monthly data of average household expenditure on milk products of a person :

| Month | Average Expenditure on Milk <br> Products (INR) |
| :--- | :---: |
| January | 3000 |
| February | 2500 |
| March | 2000 |
| April | 2100 |
| May | 4000 |
| June | 5000 |
| July | 3200 |
| August | 3100 |
| September | 3500 |
| October | 2000 |
| November | 3000 |
| December | 3100 |

(a) Draw the bar chart for the data.
(b) Find the moving average of length 3 and plot the moving averages using spreadsheet.

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