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

## Term-End Practical Examination

December, 2017

## BCSL-044(P)/S2 : 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. A survey was conducted among the youth to find the average number of hours they walk during a day. The following table shows the data :

No. of walking hours

| 2.5 | 3.0 | 3.2 | 6.0 | 7.0 |
| :---: | :---: | :---: | :---: | :---: |
| 1.0 | 8.0 | 5.5 | 1.5 | 3.5 |
| 3.7 | 7.9 | 6.4 | 6.9 | 2.9 |
| 3.1 | 11.5 | 3.7 | 4.2 | 5.4 |

Perform the following tasks for the data given above :
(a) Enter the data in a spreadsheet software and create a frequency distribution in 6 equal intervals. Use array formula to create the distribution.
(b) Draw the histogram of the data. State if the histogram shows the data is close to normal distribution or not.
(c) Find the mean and standard deviation.
(d) If 5 more samples are added to the data, then what would be the new mean and standard deviation? The data to be added is $6 \cdot 3$ hours, $1 \cdot 0$ hours, $2 \cdot 0$ hours, 1.7 hours, $2 \cdot 1$ hours.
2. Consider the following monthly data of average temperature :

| Month | Average temperature <br> $\left({ }^{\circ} \mathrm{C}\right)$ |
| :---: | :---: |
| January | $10 \cdot 5$ |
| February | $16 \cdot 7$ |
| March | $27 \cdot 5$ |
| April | $35 \cdot 7$ |
| May | $38 \cdot 2$ |
| June | $40 \cdot 1$ |
| July | $32 \cdot 5$ |
| August | 32.5 |
| September | 31.5 |
| October | $27 \cdot 0$ |
| November | $22 \cdot 0$ |
| December | $15 \cdot 0$ |

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

