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

# Term－End Practical Examination 

June， 2018

## 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．A company studied the average time of changing a mobile．The following table shows this data：

Time（in months）for change of mobile

| 27 | 22 | 08 | 16 | 31 |
| :--- | :--- | :--- | :--- | :--- |
| 22 | 17 | 12 | 11 | 25 |
| 14 | 15 | 26 | 19 | 17 |
| 13 | 08 | 12 | 16 | 45 |

Perform the following tasks for the data given above ：
$8+4+4+4=20$
（a）Enter the data in a spreadsheet package and create a frequency distribution in 5 equal intervals．Use array formula for finding the frequency distribution．
（b）Draw the histogram of data．List all the outliers in the data．
（c）Find the mean and standard deviation of the data．
（d）Remove all the outliers from the data and find the mean again．Also find the median of the entire data．
2. Waterproofing of several houses was done from a group of houses to determine effectiveness of waterproofing. The following table shows the data :

| Categories | Houses with <br> waterproofing | Houses without <br> waterproofing | Total |
| :--- | :---: | :---: | :---: |
| Leakage in House | 30 | 200 | 230 |
| No leakage in House | 120 | 150 | 270 |
| Total | 150 | 350 | 500 |

Use chi-square test to determine if the waterproofing treatment was of any use or
not. Explain your results. Make suitable assumptions.

