

196673

No. of Printed Pages : 3

BCSL-044/S1

**Bachelor of Computer  
Application (Revised) (BCA)  
Term-End Examination  
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 C/C++ compiler.
- 
-

1. A study was conducted to find average IQ level of a group of people. The following table shows the data :

IQ of Members				
109	121	128	107	101
130	135	117	106	127
132	133	123	124	115
102	107	131	117	116

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

- Enter the data in a spreadsheet software and create a grouped frequency distribution in 4 equal intervals. Use array formula to create this distribution.
- Draw the histogram of the data. Is the data close to normal distribution ?
- Find the mean and median of the data.
- If five more data values as given below are added to earlier data, then what would be the mean and median ?

Data to be added of IQ score :

132, 118, 117, 118, 120

2. A group of 8 patients were tested for a medicine, which claimed to reduce blood pressure (systolic). The following table shows their average

systolic blood pressure before taking the medicine and 3 months after taking regular doses of medicine :

Average systolic blood pressure before taking the medicine	Average systolic blood pressure 3 months after taking regular doses of medicine
175	160
125	130
135	130
160	155
135	136
145	120
155	150
150	150

Using  $t$ -test with a significance level of 5%, can you say that the medicine has resulted in reduction of blood pressure (systolic) ? Clearly state  $H_0$  and  $H_1$  and explain your results. Make suitable assumptions, if any.

20