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BCSL-044(P)/S3

BACHELOR OF COMPUTER APPLICATIONS (Revised)
(BCA)

Term-End Practical Examination

June, 2017

00515

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 survey was conducted to find the number of hours per day spent by class XII students in sleeping. The following sample shows data of 20 such students :

Number of hours (per day) for sleeping

7·5	6·2	3·1	4·0	9·5
4·7	5·6	6·2	7·2	6·3
7·4	8·1	8·6	6·7	7·1
6·2	5·3	5·9	7·5	7·3

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

(a) Enter the data in a spreadsheet software and create a frequency distribution in 6 equal ranges. Use array formula to create the distribution.

(b) Draw the histogram of the data.

(c) Find the mean and variance of the data.

(d) Find the new mean and variance if five more samples are added to the data. The additional samples data is :

Time for sleeping (in hrs) : 6·5 7·1 3·5 2·9 2·9

2. A new happiness therapy was used on 400 patients for its effectiveness. The result of the study is shown in the following table :

Categories	Happy	Not happy	Total
Patient given therapy	100	80	180
Patient not given therapy	120	100	220
Total	220	180	400

Use chi-square test to determine if the new happiness therapy has helped people to be happy. Explain your results. Make suitable assumptions, if any. *20*