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SET - 1

BACHELOR OF COMPUTER APPLICATIONS (BCA)
(Revised)
Term-End Practical Examination

02205

June, 2014

BCSL-044 : STATISTICAL TECHNIQUES LAB

Time allowed : 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 programming (if asked) you may use any C/C++ compiler.*

1. Height of 20 students of a class was measured in cms. The following data represent it : **8+4+4+4=20**

156	135	145	160	165
120	139	162	141	137
138	155	135	150	151
141	145	143	153	163

Perform the following tasks for the data given above.

(a) Enter the data in a spreadsheet package and create a frequency distribution in the ranges less than 101, 101-110, 111-120, 121-130, 131-140, 141-150, 151-160, 161-170, more than 170. Use array formula for finding frequency distribution.

(b) Draw the histogram for the data.

(c) Find the mean and standard deviation of the data using spreadsheet formula.

(d) Find the minimum and maximum height using spreadsheet formula.

2. The heart rate (pulse rate) of 6 patients were recorded before and after taking a medicine. **20**
The following table shows this data :

Pulse rate before medicine	97	75	85	104	110	89
Pulse rate after medicine	85	79	84	74	80	79

Using t-test with a significance level of 5% can you determine if the new drug results in significant reduction in pulse rate. Clearly write H_0 and H_1 and explain your results.

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BACHELOR OF COMPUTER APPLICATIONS (BCA)
(Revised)
Term-End Practical Examination

01087

June, 2014
BCSL-044 : STATISTICAL TECHNIQUES LAB

Time allowed : 1 hour *Maximum Marks : 50*

Note : (i) *There are* ***two*** *questions in this paper of* ***20*** *marks each. Rest* ***10*** *marks are for* ***viva-voce****.*

(ii) *Use any spreadsheet package. For programming (if asked) you may use any C/C++ compiler.*

1. The weight of 20 new born babies was measured (in kgs) in the hospital. This data is as under : **8+4+4+4=20**

2.525	2.710	3.251	1.750	2.151
3.111	2.115	3.510	2.159	2.751
3.010	2.111	3.000	2.250	2.650
3.811	2.911	2.851	2.651	2.950

Perform the following tasks for the data given above.

(a) Enter the data in a spreadsheet software and create frequency distribution in the ranges less than or equal to 2 kg. 2.001-2.250, 2.251-2.500, 2.501-2.750, 2.751-3.000, 3.001-3.250, 3.251-3.500, 3.501-3.750, 3.751-4.000.

Use array formula to create the frequency distribution.

(b) Draw the histogram of the data.

(c) Find the mean and variance for the data using spreadsheet formulas.

(d) Find the maximum and minimum weight using spreadsheet formulas.

2. In an experiment to study whether city smoke affects health, the following data was collected. Use chi-square or any other test to test the hypothesis that city smoke has no effect on health. Make suitable assumptions. Also explain your results. **20**

	Inhale city smoke		
	Light	Moderate	Heavy
Health affected	17	31	36
Health Not affected	38	24	19

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SET - 3

BACHELOR OF COMPUTER APPLICATIONS (BCA)
(Revised)
Term-End Practical Examination

00745

June, 2014
BCSL-044 : STATISTICAL TECHNIQUES LAB

Time allowed : 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 programming (if any) you may use any C/C++ compiler.*

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1. The life of 20 bulbs in hrs are given in the following table : **8+4+4+4=20**

125	160	175	190	111
101	195	150	140	130
120	135	145	155	165
195	185	177	167	153

Perform the following tasks for the data given above.

(a) Enter the data in spreadsheet package and create a frequency distribution in the ranges less than 101, 101-110, 111-120, 121-130, 131-140, 141-150, 151-160, 161-170, 171-180, 181-190, 191-200. Use array formula to perform this task.

(b) Draw the histogram of data.

(c) Find the mean and standard deviation for the data using spreadsheet formulas.

(d) Find the minimum and maximum values of bulb life using spreadsheet formulas.

2. A company has the following cost and revenue data : **10+10=20**

Cost (INR) (in thousand)	Sales (INR) (in thousand)
100	150
125	170
130	190
110	150
90	100
115	140
120	140
95	130

(a) Construct a scatter plot (diagram) for the given data using a spreadsheet package.

(b) Find the best linear regression line, assuming that cost is an independent variable and sales is a dependent variable. Explain your answer.

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SET - 4

BACHELOR OF COMPUTER APPLICATIONS (BCA)
(Revised)
Term-End Practical Examination

00547

June, 2014
BCSL-044 : STATISTICAL TECHNIQUES LAB

Time allowed : 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 programming (if any) you may use any C/C++ compiler.*

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1. The amount of purchases (in Indian Rupees) made by 20 customers of a store is recorded in the following table : **8+4+4+4=20**

150	2010	300	600	750
1500	10	275	99	1200
1375	1700	1900	700	400
700	25	190	1800	1725

Perform the following tasks for the given data.

(a) Enter the data in the spreadsheet package and create frequency distribution in the ranges 1-250, 251-500, 501-750, 751-1000, 1001-1250, 1251-1500, 1501-1750, 1751-2000, more than 2000. You must use array formula for this task.

(b) Draw the histogram for the data.

(c) Find the mean and variance for the data using spreadsheet formula.

(d) Find the minimum and maximum purchases using spreadsheet formula.

2. Consider the following data of sales of milk by a dairy in a week : **20**

Day	Sale (in litre)
Monday	500
Tuesday	400
Wednesday	450
Thursday	500
Friday	600
Saturday	700
Sunday	400

Find the moving averages of length 3 and 4. Plot these moving averages using spreadsheet.
