

The following figures of price per litre were recorded :

S. N.	1	2	3	4	5	6	7	8	9
Cuttack	44	61	56	59	68	78	63	56	61
Calicut	64	58	54	57	61	62	59	55	47

Test, whether the average price can be said to be same in the two cities.

Write the null and alternative hypothesis. Select the appropriate statistical method and write the procedure to conduct the test in SPSS. Also mention the circumstance of p-value to reject the null hypothesis.

[This question paper contains 6 printed pages.]

**Your Roll No.....**

**Sr. No. of Question Paper : 4157**

Unique Paper Code : 61018313

Name of the Paper : (GEC-3.2) Statistical Data Analysis Using Software Packages (SPSS)

Name of the Course : **B.VOC. (CBCS) 2019**

Semester : III

Duration : 2 Hours

Maximum Marks : 50

**Instructions for Candidates**

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. All questions are compulsory.

1. True/False : (1×6)

(a) In SPSS, The data editor has two views.

(b) The result is said to be significant, if level of significance is greater than the p-value.

(c) In SPSS, variable measure 'Nominal' is used for quantitative observation.

(d) Histogram is preferred for continuous data.

(e) The full form of the SPSS is 'Statistical package for statistical sciences'.

(f) In SPSS, the default variable is aligned in right.

2. Attempt any **seven** of the following : (2×7)

(a) Give the procedure for constructing box plot diagram in SPSS.

(b) Write the procedure to open the in-built data set named "tv-survey" in SPSS.

(c) In SPSS, write the procedure to prepare a frequency table of the variable 'department' in the data set 'contacts' and also give the procedure to create a bar chart of this frequency distribution.

(d) Data of sales (per day) of 20 days for a particular item are given. One needs to know the logarithm value of these sales (per day). Give the procedure to obtain it using SPSS.

(d) Define and explain Skewness using sketch of frequency curves. Interpret the result and comment on the skewness from the table.

#### Statistics

##### Amount of last sale

N	Valid	70
	Missing	0
Range		770.50
Percentiles	25	12.0000
	50	24.0000
	75	52.8750

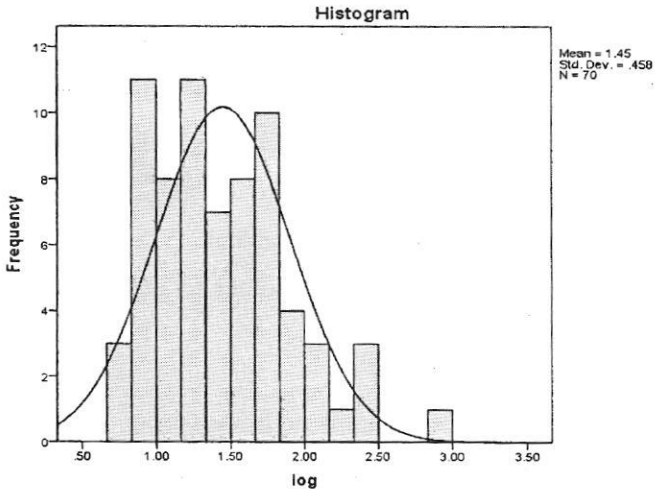
(e) Give the procedure to obtain the Karl Pearson coefficient and Spearman rank correlation coefficient for bivariate data. Write the null and alternative hypothesis. Comment on the correlation coefficient from the following table.

#### Correlations

		Accidents	Population at risk
Accidents	Pearson Correlation	1	-.106
	Sig. (1-tailed)		.421
	N	6	6
Population at risk	Pearson Correlation	-.106	1
	Sig. (1-tailed)	.421	
	N	6	6

(f) To compare the price of mustard oil in two cities, 9 shops were chosen at random in each town.

(e) Interpret the following figure :



- (f) Write the procedure to import the excel file into SPSS.
- (g) Define the function 'values' and 'columns' in variable view of SPSS.
- (h) Differentiate between Percent and Valid Percent from the following table.

		Department			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Development	16	22.9	25.8	25.8
	Computer services	30	42.9	48.4	74.2
	Finance	13	18.6	21.0	95.2
	Other	3	4.3	4.8	100.0
	Total	62	88.6	100.0	
Missing	Don't know	8	11.4		
	Total	70	100.0		

3. Answer any **five** of the following : (6×5)

(a) Using a questionnaire, The data of 50 respondent has been collected. From the questionnaire, a person wants to enter the names, marks, pocket money, age and habit of smoking of respondent into spsss. Explain what type of variable and measure, he has to select to enter the above data properly.

(b) Data of purchase value of 100 houses in a city are given. The range of the purchase value is Rs. 25 lakh to Rs. 90 lakh. Write the procedure to :

(i) Obtain the number of houses, which have purchase value greater than Rs. 55 lakh.

(ii) Sort the data set into ascending order.

(iii) Obtain average price, minimum price, maximum price and variance of new data set

(c) Explain the functions 'Frequencies', 'Descriptive and 'Explore' used in SPSS with examples.