

- (f) What are the different levels of measurement specified in SPSS and explain them. (6×5)

[This question paper contains 6 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 8310

Unique Paper Code : 61018313

Name of the Paper : (GEC-3.2) Statical Data Analysis Using R

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

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. Fill in the blanks :

- (a) In SPSS, the data editor has two views and
- (b) In SPSS, the default variable width is
- (c) In SPSS, variable measure 'Nominal' is used to the items.

- (d) In SPSS, output file is saved with the extension
- (e) In SPSS, If one wants to go to a particular variable in data view, the command is used from the edit menu.
- (f) The result is said to be significant, if p-value is (1×6)

2. Attempt any **seven** of the following :

- (a) Give the procedure for constructing pie chart in SPSS.
- (b) Give the procedure to open the in-built data set named "car_sales" in SPSS.
- (c) Interpret the result on the basis of below table.

Amount of last sale		
N	Valid	70
	Missing	0
Mean		55.4500
Median		24.0000
Skewness		5.325
Kurtosis		34.292
Minimum		6.00
Maximum		776.50
Percentiles	25	12.0000
	50	24.0000
	75	52.8750

- (d) 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.

- (e) A company selects eight salesmen at random and their sales figures for the previous month are recorded. They then undergo a training course devised by a business consultant, and their sales figures for the following month are compared as shown in the table. Has the training course caused an improvement in the salesmen's ability?

Previous Month	75	90	94	95	100	90	70	64
Following Month	77	101	93	92	105	88	76	68

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

- (b) Write the procedure to obtain the frequency distribution and the bar chart for this frequency distribution. The following table shows the department-wise frequency. Interpret the result 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		

- (c) Give the procedure to obtain the Karl Pearson coefficient and Spearman rank correlation coefficient for bivariate data. Comment on the p-value and correlation coefficient from the following table.

			Correlations	
			Sales in thousands	Price in thousands
Spearman's rho	Sales in thousands	Correlation Coefficient	1.000	-.492
		Sig. (2-tailed)	.	.000
		N	157	155
	Price in thousands	Correlation Coefficient	-.492	1.000
		Sig. (2-tailed)	.000	.
		N	155	155

- (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.
- (e) Differentiate between variable labels and values labels in SPSS.
- (f) Write the procedure to generate the 100 random numbers using normal distribution.
- (g) Differentiate between frequencies and descriptive in descriptive statistics menu of SPSS.
- (h) Interpret the information on the basis of following table.

One-Sample Test

Test Value = 65						
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Prices	2.825	9	.020	2.50000	.4979	4.5021

(2×7)

3. Answer any **five** of the following :

- (a) Explain the concept of 'case summaries' in the function 'reports'. Discuss the role of 'grouping variable(s)' in case summaries with example.