

Raja N. L. Khan Women's College (Autonomous)

2023

Geography

P.G. CBCS

3rd Semester Examination 2023

Paper-GEO 305

(PRACTICAL)

Full Marks - 25

Time- 4hrs

The figures in the right-hand margin indicate marks.
Candidates are required to give their answers in their own words as far as practicable.

Illustrate answers as necessary.

Unit-33

(Title of the Unit: Advanced Quantitative Techniques)

[F.M.-25]

1. The crop yield (Bushels per Acre) data of a region is obtained with three fertilizer types and two planting densities types as presented in the following table. Set up an ANOVA table in SPSS to find out,
- if the fertilizer types make any significant difference in crop yield;
 - if planting density types make any significant difference in crop yield; and
 - if the interaction term between fertilizer and planting density is significant.

Interpret the results and answer the questions taking a level of significance at 0.05.

Planting Density	Types of Fertilizer		
	A	B	C
Low Density	177.23	176.48	177.10
	176.41	177.41	176.90
	177.13	177.39	177.03
	176.75	177.38	176.41
High Density	177.97	176.98	178.29
	177.03	178.00	176.43
	176.87	176.93	176.93
	176.01	177.03	177.34

2. The following table represents health data of a region. Derive the multiple linear regression of death rate on the explanatory variables in SPSS. Comment on model summary, regression coefficient and multicollinearity results.

(2)

Sl. No	Y	X1	X2	X3	X4
1	8.0	78	284	9.1	109
2	9.3	68	433	8.7	144
3	7.5	70	739	7.2	113
4	8.9	96	1792	8.9	97
5	10.2	74	477	8.3	206
6	8.3	111	362	10.9	124
7	8.8	77	671	10.0	152
8	8.8	168	636	9.1	162
9	10.7	82	329	8.7	150
10	11.7	89	634	7.6	134

Y = death rate per 1000 residents

X1 = doctor availability per 100,000 residents

X2 = hospital availability per 100,000 residents

X3 = annual per capita income in thousands of dollars

X4 = population density (people per square mile)

3. Use the data table provided in question number two and derive partial correlation coefficient between death rate and doctor availability where influences of other variables are held. 4
4. Laboratory Note Book and Viva Voce. 5