Raja N. L. Khan Women's College (Autonomous)
1st semester End Examination 2022
Subject: Geography
Paper: 105

Unit 10 : Basic Statistics in Geography

(Practical)

Group - A

1. **Answer the following questions:**   5x2=10

   a) What is spectral reflectance curve?

   b) What do you mean by Standard False Colour Composite?

   c) Write a short note on active remote sensing.

   d) Distinguish between selective scattering and non-selective scattering.

   e) Write a short note on advantages of Remote Sensing.

Group - B

2. **Answer the following question:**   5x2=10

   Identify the five land use features from satellite image.

Group - C

3. **Practical note book and viva voce.**   5

Unit 9 : Basic Statistics in Geography

(Practical)

Answer the following questions:

1. The following table shows heights (in inches) of 12 fathers and their oldest sons.   8

Height of father (inch)	65	63	67	64	68	62	70	66	68	67	69	71
Height of son (inch)	68	66	68	65	69	66	68	65	71	67	68	70

I.   Fit a bivariate linear regression equation of sons' height on fathers' height.

II. Construct a scatter diagram and find the least-squares best fit line based on the regression equation.

III. Derive the error variance, explained variance, and standard error of estimate using the regression model.

IV. Test the slope/variance of the regression coefficient in the model using ANOVA(F-Test) after formulating suitable hypotheses ($F_{0.05, (1,10)} = 4.96$).

2. The following table shows the frequencies of abandoned farms collected randomly in a hilly surrounding in relation to aspect of site of farm and altitude of farm.   8

Altitude (m)	Aspect of site of farm			
	North	South	East	West
100-150	13	0	14	1
151-200	21	2	17	9
201-300	20	9	21	10
301-400	30	13	29	15

Test if abandonment of farm with respect to aspect is independent of abandonment of farm with respect to altitude using Chi-Square test. ($\chi^2_{0.05, 9} = 16.92$).

3. The 1st Semester Postgraduate class in Geography in a college includes 13 boys and 10 girls while those for the 3rd Semester are 10 and 15, respectively. In a congregation, a girl was randomly selected from the postgraduate students to felicitate a guest. What is the probability that the girl studies in the 3rd Semester? What is the probability that the girl studies either in the 1st or in the 3rd Semester?   4

4. Practical note book and viva voce.   5