Geography (P.G.)
[CBCS]
M.Sc. First Semester End Examination-2023
(Regular & Supplementary Paper)
PAPER-105

Full Marks: 50   ***Time: 04 Hrs***

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 the answers wherever necessary.

Unit: 9
[Basic Statistics in Geography]
Full Marks 25

1) A random sample of 500 students were obtained with respect to their economic condition and merit as presented in the table below. Test if the two attributes are independent using Chi-Square test $\left(X^2_{0.05, 2} = 5.99 \right)$ 8

Merit	Economic	condition	
	Rich	Middle Class	Poor
Meritorious	42	137	61
Not Meritorious	58	113	89

2) Consider the following table and find the first order partial correlation coefficient between yield and rainfall while the

influence of temperature is held.

Sl. No.	Y(Yield (Metric tones/Hectares))	X1 (Rainfall(Cm))	X2 (Temperature (^{0}C))
1	5	20	13
2	4	25	8
3	6	27	12
4	6	25	12
5	7	22	13

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3) An opinion poll surveyed a simple random sample of 1200 students. Respondent were classified by gender (Mate and Female) and by opinion on (Reservation for women-Yen) No Reservation-No, No opinion-can't say) Results are shown in following table

	Opinion on	Women	Reservation
	Yes	No	Cant Say
Male	250	200	50
Female	250	400	50

Does the men's opinion on women reservation differ significantly from the women's preference? 4

4) Laboratory Note Book Viva voce 5

Unit: 10
[Remote Sensing]
Full Marks 20

Group A

1) Answer the following questions: 5x2=10

a. Distinguish between Mie scattering and Rayleigh scattering.

b. How do different wavelengths of electromagnetic radiation impact remote sensing applications?

c. What is parallax?

d. What is the concept of IFOV?

e. What is nadir point.

Group B

2) Answer the following questions: 2x5=10

a. Identify the five land use features from aerial photos or satellite image.

Group C

3) Practical note book and viva voce 5