SAVITRIBAI PHULE PUNE UNIVERSITY
Geography T.Y.B.Sc. (Credit System)
Revised Syllabus (From June-2021)
Semester: V
GG 357: Techniques in Quantitative Analysis (Practical Paper-1)

Objectives:

- To familiarize the students with statistical analysis and its applications in Geography

No. of Credits: 02 **No. of Periods: 30**

- **Each Practical batch will be comprised of 12 students**

Sr. No.	Topic	Sub-Topic	Learning Points	Periods
1	Geographical data	Nature Scales of measurement	1. Spatial and Temporal 2. Discrete and Continuous data 3. Grouped and Ungrouped data 4. Nominal, ordinal, Interval and ratio scales	04
2	Statistical data	Frequency distribution	1. Tally marks and frequency table 2. Frequency histogram, polygon and curve 3. Cumulative frequency and Ogive curves	04
3	Central Tendency	Measures of central tendencies	1. Meaning and description of central tendencies.- Mean, Median, Mode 2. Calculation of Mean, Median, Mode for ungrouped and grouped data.(2 Examples)	04
4	Dispersion	Measures of dispersion	Mean deviation, absolute deviation, variance, Standard deviation and coefficient of variation.	04
5	Population and sample analysis	Population and samples	1. Definition of population and sample. Meaning of unbiased random sample. 2. Methods of sampling: Random, Systematic and stratified	04
		Introduction to hypothesis	1. Meaning and definition of: 1. Null and alternative hypothesis 2. Level of significance (Rejection level) 3. Degrees of freedom 4. Parametric and non-parametric tests	04

Note:

1. Use of map stencils, log tables, statistical tables and calculators is allowed at the time of examination.
2. Journal completion by the student and the certificate of completion by the practical in charge and the` Head of the department is compulsory.
3. Candidate without a certified journal should not be allowed for the practical examination.

6	Bivariate analysis	Hypothesis testing Correlation and Regression	1. Application of following tests: 1. Chi squared test (one way only) 2. Student's t test (comparison of sample means) 3. Concept of bivariate correlation and regression. 4. Meaning of coefficient of correlation. 5. Calculation of Pearson's product moment 6. Correlation coefficient (two examples) 7. Spearman's rank order correlation coefficient. (Two examples). 8. Calculation, plotting and interpretation of Simple regression equation (two examples).	06

Reference Books:

1. Ebdon David, 1989, Statistics for Geographers
2. S. N. Karlekar and M. Kale (2006) : Statistical analysis of geographical data, Diamond Publication, Pune 3. King, 1975, Statistical Geography
3. Norcliffe G.B. (1977). Inferential statistics for Geographers (Hutchinson, London)
4. Rogerson P.A. (2001). Statistical methods for Geography (SAGE pub., London, New Delhi)