

COMPULSORY PAPAR-II
ADVANCED STATISTICS AND COMPUTER APPLICATION

The paper is proposed to have theory and practical both. The Theory paper would be of 75 marks and practical paper would be of 25 marks. The practical examination would be conducted by the external examiner along with internal examiner.

Section A: Theory

Max. Marks : 75

- 1. Analysis of Variance :**
 - 1.1 Need for Analysis of Variance
 - 1.2 Standard deviation of combined samples
 - 1.3 One-way Analysis of variance
 - 1.4 Post-Hoc test of significance

- 2. Analysis of Covariance :**
 - 2.1 Need for Analysis of Covariance
 - 2.2 Application of Analysis of Covariance

- 3. Partial and Multiple Correlations.**
 - 3.1 Meaning and Limitations of Partier Correlation methods
 - 3.2 Different order of Partial Correlation and its computation
 - 3.3 Partial Standard Deviation
 - 3.4 Meaning of Multiple Correlation.
 - 3.5 Computation of Various order of Multiple Correlation.
 - 3.6 Law of diminishing return and characteristics of multiple correlation.
 - 3.7 Application of partial and multiple correlation in research

- 4. Prediction and Wherry Dollittle Method :**
 - 4.1 Meaning or prediction
 - 4.2 Two variable regression equation
 - 4.3 Multiple regression equations
 - 4.4 Wherry Doolittle method of Multiple Correlation.

- 5. Special Correlational and Non-Parmetric Methods :**
 - 5.1 Chi-square
 - 5.2 Rank difference method of correlation
 - 5.3 Bisenial correlation
 - 5.4 Tetrachoric correlation
 - 5.5 Phi-coefficient
 - 5.6 Phi-coefficians
 - 5.7 Contingency Coefficient
 - 5.8 Curvilinear Relationship

- 6. Programming with Basic**
 - 6.1 Expressions in BASIC
 - 6.2 Printer Control : Comma, semicolon, TAB, USING, LPRINT and LPRINT Using statements
 - 6.3 Jumping Branching and Looping

- 6.4 Subscripted Variables and functions.
- 6.5 Programmes of mean, S.D., Coefficient of variation range, largest and smallest number.
- 6.6 Programmes of Correlation coefficient, one way ANOVA and two way ANOVA chi square etc.

Section B: Practical

Max marks : 25

The Practical would be conducted in the area of programming with BASIC and application of statistical techniques in the research problems of physical Education.