NORTH MAHARASHTRA UNIVERSITY, JALGAON.

M.Ed. Course

Group - B Paper - 9

ADVANCED EDUCATIONAL STATISTICS

OBJECTIVES:

Knowledge with comprehension :

The learner explains :
1) The properties of Normal distribution.
2) The methods of measuring divergence from Normality.
3) The uses of Normal P.Carve in Education.
4) The meaning of regression.
5) The method of preparing regression equations.
6) The application of regression equations in prediction.
7) The significence of the statistical measures and the difference between them.
8) The hypothenis of chance.
9) The meaning of Null hypothesis.
10) The use of Chi-square test.
11) The different methods of scaling.
12) The meaning of reliability and validity of test scores.
13) The process of item analysis.
14) The meaning and significance of partial and multiple correlation.
15) The meaning of variance and covariance.
16) The methods of analysing variance and covariance.
17) The meaning of factor analysis.
18) The basic assumptions of factor analysis.

Application :

1. The learner solves the statistical problems in Psychology and education based on the different units and subunits in the syllabus.

2) The learner interprets the results

Advanced Educational Statistics: Syllabus

Unit.1 : The Normal Distribution :

1.1 Properties of Normal Probability Distribution

1.2 Measuring divergence from Normality

    1.2.1 Skewness.
    1.2.2 Kurtosis.
    1.2.3 Comparing a given histogram with normal curve of the same area N and O

    1.3 Applications of the Normal Probalitity curve.

Unit 2 : <u>Regression and Prediction</u>

     2.1 Meaning of regression.
     2.2 Regression Equations .
     2.3 The Accuracy of Predictions from Regression equations
     2.4 Application of Regression equations in Prediction.

Unit 3 : Significance of the statistical measures and the difference between them.

     3.1 The Significance of the Mean and of the Median
          The Significance of Measures of variability.
          The Significance of Percentages and of the Co. efficient of correlation.

     3.2 The Significance of the difference between Means, Sigma and percentages and Correlation Co-efficients.

Unit 4 : <u>Testing Experimental Hypothesis</u>

     4.1. The Hypothesis of chance
     4.2 The CHI-SQUARE TEST and the Null hypothesis.

Unit 5 : <u>The Scaling of Mental tests.</u>

     5.1 Sigma Scaling
     5.2 Sigma scores and standard scores
     5.3 The T-Scale
     5.4 The Stanine Scale.
     5.5 Percentile scaling.

Unit 6.: <u>The Reliability and Validity of Test Scores.</u>

     6.1 The Reliability of test scores and methods of determining it.
     6.2. The validity of test scores and determing Validity.
     6.3 Items Analysis.

Unit 7 : <u>Partial and Multiple Correlation.</u>

     7.1 The Meaning and Significance.
     7.2 Simple applications of partial and multiple correlation.

Unit 8 : <u>Analysis of Variance.</u>

     8.1 Meaning of Variance.
     8.2 Method of analysing variance.
     8.3 Meaning of co-variance.
     8.4 Analysis of co-variance.

Unit 9 : <u>Factor Analysis</u> :

     9.1 The Nature of factor Analysis.
     9.2 Basic assumptions of factor analysis.
     9.3 Application of Simple principles of factor analysis in Psychology and Education.

<u>REFERENCES AND BOOKS FOR STUDY</u> :

1. H.E. Garstt. Statistics in Psychology and Education. Longman Green and Co. London.

2. B.Fruchter, Introduction to factor Analysis D.Van Nostrand and Co. N.Y.

3. G. Thempson. Factorial Analysis of Human Ability, University of London Press.

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dbs./

विनि ९, २ व ३ पाठ्यक्रमासाठी

बी. एड. परीक्षेच्या पहिल्या पाठ्यक्रमासाठी-प्रश्नपत्रिकेचा ढाचा खालील प्रमाणे राहील.

विभाग - १ : १ ते ४ घटक

प्रश्नक्रमांक		गुण				अपेक्षील उत्तर मर्यादा [शब्दांत]
१.	दीर्घोत्तरी	१३				३००
	किंवा					
१.	--"--	१३				३००
२.	--"--	१३				३००
	किंवा					
२.	--"--	१३				३००
३.	लघुत्तरी	१२	पाच पैकी तीन	प्रत्येकी	१०० शब्द	
४.	लघुत्तरी	१२	पाच पैकी तीन	प्रत्येकी	१०० शब्द	

विभाग -२ घटक ५ ते ८

५.	दीर्घोत्तरी	१३				३००
	किंवा					
५.	-"-	१३				३००
६.	दीर्घोत्तरी	१३				३००
	किंवा					
६.	-"-	१३				३००
७.	लघुत्तरी	१२	पाच पैकी तीन	प्रत्येकी	१००	
८.	लघुत्तरी	१२	पाच पैकी तीन	प्रत्येकी	१००	

बी. एङ. [फिजिकल] च्या १ ते ४ कोर्सासाठी प्रश्नपत्रिकेचा ढाचा-

विभाग - १ साठी

१.	दीर्घोत्तरी	१३				३००
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१.	-"-	१३				३००
२.	-"-	१३				३००
	किंवा					
२.	-"-	१३				३००
३.	लघुत्तरी	१२	पाच पैकी तीन	प्रत्येकी	१००	
४	लघुत्तरी	१२	पाच पैकी तीन	प्रत्येकी	१००	

विभाग - ३ साठी

५.	किंवा दीर्घोत्तरी	१३				३००
५.	-"-	१३				३००
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	किंवा					
६.	-"-	१३				३००
७.	लघुत्तरी	१२	पांच पैकी तीन - प्रत्येकी		१००	
८.	लघुत्तरी	१२	पांच पैकी तीन	प्रत्येकी	१००	

बी.एड (जनरल) पाठ्यक्रम ४ व ५ व बी.एड (स्पेशल)
पाठ्यक्रम ५ च्या प्रस्तपत्रिकेना आराखडा खालील प्रमाणे