

**ASSOCIATE DEGREE IN ARTS**  
**Statistics (Optional)**

**Outlines of Tests**

Paper: (Written) Time – 3 hours .. .. . Marks  
100

**Syllabi and Courses of Reading**

**Paper: (Written)**

**1. Introduction**

Definition, Characteristics and limitations of statistics, Collection, classification and tabulation of data.

**2. Graph and Diagrams**

Bar and pie diagrams. Graphs of frequency distribution viz. Histogram, frequency polygon, frequency curve, cumulative frequency curve, Graphic interpolation.

**3. Averages**

Elementary knowledge and numerical illustrations of arithmetic mean, median mode, and weighted average. Smoothing of fluctuations by moving average method.

**4. Dispersion:**

Elementary knowledge and numerical illustrations of range, fractiles, quartile deviation, standard deviation, co-efficient of skewness and co-efficient of variation.

**5. Attributes and Chi-Square:**

Concept of attribute, idea of independence and association, dichotomy, co-efficient of association, contingency table. Chi-square.

**6. Correlation:**

Concept of regression, simple correlation and rank correlation with numerical illustrations.

**7. Sampling:**

Concept of sampling. Definition of population and sampling unit. Purposive and random sampling. Drawing of a random sample without replacement from finite population.

**Books Recommended:**

1. Zia-ud-Din, M., Practical Statistics with Fundamentals of Theory, 8<sup>th</sup> edition, The Punjab Educational Press, Lahore.
2. Chambers, E.G., Statistical Calculations for Beginners. Cambridge University Press, London.