

To be effective from 2016-2017  
**REVISED SYLLABUS B.A. SEMESTER-1**  
**STATISTICS ELECTIVE -- I PAPER 101 (PAPER 1)**  
**FUNDAMENTAL OF STATISTICS**

**1 Statistics, Primary and Secondary data, Classification. (25%)**

Definition of statistics, Concept of primary and secondary data. Methods of collecting primary data: Direct investigation, indirect investigation, Information through local agencies, mailed Questionnaire, Framing of questionnaire, Source of secondary data.

Concept of classification, types and importance of classification, Example of Classification.

**2 Graphs and Diagrams: (25%)**

Representation of statistical data on (1) Histogram (2) Frequency polygon (3) Frequency curve (Ogive curve). To obtain median, mode, quartiles, deciles, percentiles, from the above graph, simple examples.

**3 Measure of Central Tendency (25%)**

Meaning of central tendency, various. Measure of central tendency: A.M., Median, Mode, Their merits and demerits, Simple examples of Mean, Median and Mode. Various Measure of central tendency: Quartiles, deciles, percentiles. Their merits and demerits, Simple examples.

**4 Measure of dispersion and Skewness: (25%)**

Definition of dispersion, Measures of dispersion. Simple examples to find various measures of dispersion by different methods (Range, Q.D., M.D., S.D) for grouped and ungrouped data. Skewness: Meaning of Skewness, Test of skewness, Measure of Skewness, Karl pearson's and Bowleys method to measure the skewness.

**Reference books:**

- (1) D.S.Sancheti & V.K.Kapoor: "Statistics:Theory,Method&Application" Sultan chand & Sons,New delhi.
- (2) D.N.Elhance:"Fundamentals of statistics"
- (3) Goon,Gupta,Dasgupta: "An outline of statistical Theory"Vol1 and 2, Wordd press,Calcutta.

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**STATISTICS ELECTIVE – I PAPER 102 (PAPER 2)**  
**APPLIED STATISTICS --I**

**1. Population Census: (25%)**

Population Census: Methods of population census and its uses. Study of India's population census. Limits of population census.

**2. Demography Methods: (25%)**

Meaning and scope of demography, use of demographic statistics, Method of collecting demographic statistics: Death rates, Crude death rate (C.D.R.) and standardized Death Rate (S.D.R.) Examples to find C.D.R., S.D.R., and to compare the healthiness of cities. Meaning of Infant Mortality Rate (I.M.R.), Crude birth rate (C.B.R.), Meaning of fertility rate, General Fertility Rate (G.F.R.), Specific Fertility Rate (S.F.R.) and total fertility rate (T.F.R.), Simple examples.

**3. Time Series (25%)**

Meaning of Time series, various components of time series: Trend, Seasonal, Cyclic and Random components. Methods of measuring Trend by (a) Graphical method (b) Moving average method, (c) Least squares method.

Concept of principle of least squares, Curve fitting of linear and quadratic, functions by the principle of least squares and to estimate or to obtain trend for simple numerical data. Seasonal indices and simple examples to obtain seasonal indices.

**4 Index Numbers (25%)**

Definition, Limitations and uses of Index numbers. Construction of wholesale price index number and cost of living index number, Construction of index number by aggregate expenditure method and family budget method using Laspeyres, Paasches and Fishers Formula.

**Reference Books:**

- (1) S.C.Gupta & V.K.kapoor :Fundamental of applied statistics Sultan Chand & Sons, New Delhi.
- (2) Sancheti & Kapoor: Business Mathematics”Sultan chand & Sons,New delhi.
- (3) Kapoor V.K.: Business Mathematics”Sultan chand & Sons,New delhi.
- (4) Parimal Mukhopadhyay:Mathematical Statistics” Books & allied (p) Ltd.

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**REVISED SYLLABUS B.A. SEMESTER-1**

**STATISTICS ELECTIVE-- II PAPER 101 ( PAPER 7)**

**FUNDAMENTAL OF STATISTICS**

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Definition of statistics, Concept of primary and secondary data. Methods of collecting primary data: Direct investigation, indirect investigation, Information through local agencies, mailed Questionnaire, Framing of questionnaire, Source of secondary data.

Concept of classification, types and importance of classification, Example of classification.

**2 Measure of Central Tendency: (25%)**

Meaning of central tendency, various. Measure of central tendency: A.M., Median, Mode, Their merits and demerits, Simple examples of Mean, Median and Mode. Various measure of central tendency: Quartiles, deciles, percentiles. Their merits and demerits, Simple examples.

**3 Measure of Dispersion: (25%)**

Definition of dispersion, Measures of dispersion. Simple examples to find various measures of dispersion by different methods (Range, Q.D., M.D., S.D.) for grouped and ungrouped data.

**4 Skewness: (25%)**

Meaning of Skewness, Test of skewness, Measure of Skewness, Karl pearsons and Bowleys method to measure the skewness.

**Reference Books:**

- (1) S.C.Gupta & V.K.kapoor :Fundamental of applied statistics Sultan Chand & Sons New Delhi.
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