

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT

B.Sc. Semester – I

STATISTICS PAPER – I

[Effective from June-2011]

UNIT - I: CALCULUS (40%)

- a) Rules for taking limit of a function
- b) Definition and rules (without proof) of differentiation, derivatives of a composite and implicit functions, second order derivative, Maxima and Minima of a function and it's application to problems relating to business, commerce and economics.

UNIT - II: INTEGRATION (30%)

Concept of definite and indefinite integration of a function and integration of standard form x^n , a^x , e^x , $\log x$.

UNIT - III: TIME SERIES (30%)

- Idea of time series, components of time series
- Measurement of trend by principle of least squares for mathematical curves (up to second degree) , moving average method,

Books :

Pavale & Bhagwat	: The Element Calculus, Popular Prakshan, Bombay
Patel A.G. & Patel G.C.	: Business Mathematics, Atul Prakashan, Ahd.
Gupta S.P.	: Statistical Methods : S.chand & Co., New Delhi.
Gupta S.C.	: Fundamental of mathematical statistics : sultan chand & sons,
Shah H.D.	: Ganitik Ankada Shastra : Granth Nirman Board, Ahd.
Lewis J.P.	: An Introduction to mathematics : Mac millon
Gupta S.C.&Kapoor, V.K.	: Applied statistics : Sultan chand & sons,

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STATISTICS PAPER - II

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UNIT - 1 : Nature and scope of statistics (20%)

Meaning and definition of statistics, uses of statistics, limitations of statistics, distrust of statistics.

UNIT - 2 : Compilation of data : (20%)

Primary data, secondary data, methods of collecting primary data, sources of secondary data, precautions in the use of secondary data, characteristics of the ideal questionnaire.

UNIT – 3 : Classification and Tabulation: (20%)

Meaning of classification and tabulation, merits of classification and tabulation, construction of tables, rules for the construction of a good table. Frequency distribution :

Discrete and continuous frequency distribution,

Cumulative frequency distribution.

UNIT – 4 : Measures of central tendency : (40%)

Meaning of average or central tendency, measures of average: mean (arithmetic mean, geometric mean, harmonic mean), median, mode, merits and demerits of different measures of average, characteristic of a good average, quartiles, deciles, percentiles.

Books:

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|-----------------------------------|------------------------------|---|
| 1. P.G.Hoel (1960) | Elementary Statistics | 4 th Wiley International |
| 2. Spiegel | Statistics | 1 st MC Grow Hill
Book Co. |
| 3. Goon. Gupta
Dasgupta (1962) | Fundamental of
Statistics | 4 th Bhattaahrya word
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B.Sc. Semester – II

STATISTICS PAPER - III

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UNIT – 1 : Diagrammatic and graphic presentation of data : (30%)

Importance and limitations of diagrams and graphs, types of diagram- one dimensional and two dimension diagrams pictorial diagrams, types of graphs – histogram, frequency polygon, frequency curves, ogives or cumulative frequency curves, finding median and mode from graphs.

UNIT – 2 : Dispersion : (40%)

Meaning of dispersion, absolute and relative measures of dispersion – range, mean deviation, variance, coefficient of variation.

UNIT – 3 : Skewness : (30%)

Absolute and relative measures of skewness, Karl Pearson's coefficient of skewness, Bowley's coefficient of skewness.

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STATISTICS PAPER - IV

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UNIT I: **PROBABILITY** (30%)

Random process, random experiment, Trial, Sample point, Sample space, definitions of equally likely, mutually exclusive and exhaustive events, venn diagram.

Definition of probability, classical and relative frequency approach to probability, axiomatic approach to probability and its properties.

UNIT II: **INDEX NUMBER** (40%)

Meaning of Index Number, Characteristics and uses of it, Construction of whole sale price index number, methods of computation of Laspayes, Pasche, Fisher, Bowley, Marshal Edgeworth index numbers. T.R.T and FRT texts. Construction of cost of living index numbers, laminations of price index number and living index numbers.

UNIT-III: **NATIONAL INCOME** (30%)

Definition of national income, concept of national income and its uses.

Methods of estimation, Income method, Net product method, Social Accounting method, Limitations of national income.

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STATISTICS PRACTICAL PAPER – I

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Practical based on Statistics Paper I

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT

B.Sc. Semester – I

STATISTICS PRACTICAL PAPER – II

[Effective from June-2011]

Practical based on Statistics Paper II

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B.Sc. Semester – II

STATISTICS PRACTICAL PAPER – III

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STATISTICS PRACTICAL PAPER – IV

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Practical based on Statistics Paper IV