

Parvatibai Chowgule College of Arts and Science
(Autonomous)
FOUNDATION COURSE OFFERED FOR B.A. STUDENTS

Paper Title: Elements of Basic Statistics

Paper Code: FC – D (2A)

Marks: 50+50=100

Credits: 2+2 = 4

Duration : 30+30 = 60 Hours

Course Objective:

- To make student comfortable with understanding numbers, especially those students who are not come from mathematics background.
- To provide brief idea about basic statistical terms and understand simple statistical tools.
- To aware student soft computing skills using Excel.

Learning Outcome of the Course:

- Apprehension about the numbers /data will be minimised.
- Students will be able to understand statistics at elementary level.
- Students will gain idea of applicability of EXCEL.

SEM I

Unit 1: Introduction (15 hours)

- Introduction to number system, Percentage, Ratio, fraction, mixed fractions
- Representation of numbers, arithmetic operation ,
- Unitary methods, measuring units and their usage
- How to use Graph papers , how to take proper scale scales
- Illustrative examples

Unit 2: Introduction to Statistics: (10 hours)

- **Introduction of statistics, definition, scope in various fields,**
- Classification, Types of variables: Discrete & Continuous, Qualitative & Quantitative and Types of Scales: Nominal Ordinal, Ratio and interval (Optional)
- **Tabulation of data**
Construction of frequency distribution
Cumulative frequency distribution
- **Difference between graphs and diagram**
Representation and interpretation of data using various graphs and diagrams
Graphs : Histogram, ogive curves
Charts : Simple, multiple, subdivided bar diagram and pie chart

Unit 3: Sampling (08 hours)

- Data Collection: Primary & Secondary Data, Data collection Techniques Concept: Population, Sample and census . Advantages of sampling over census.
- Simple random sampling,
- Stratified sampling, systematic sampling. (optional)
- Techniques of drawing samples.

References:

- S. C. Gupta. (2000). Fundamentals of Statistics. Himalaya Publishing House. New Delhi.
- C. R. Kothari and G. Garg. (2010). Research Methodology Methods and Techniques, NEW AGE International Publishers Ltd. New Delhi.
- B. L. Agarwal (2006). Basic Statistics, New Age International, New Delhi.

SEM 2**Unit 1: Univariate Statistics (15 hours)**

- Revision of SEM I
- Computation , Meaning and interpretation of Arithmetic mean , median and mode and their applications in daily routine
- Locating Mode, median, quartiles, deciles and percentiles using graph.

Unit 2: Methods of primary data collection (10 hours)

- Methods of primary data collection: Questionnaire, Schedule ,
- Difference between Questionnaire, Schedule
- Guidelines of constructing questionnaires and schedules.
- Collection of qualitative data : Individual interviews , Focus groups, Observations and Action Research

Unit 3: Introduction to MS Excel (05 hours)

- Introduction to Excel
- Simple arithmetic calculations
- Plotting graphs, diagrams, basic calculation using MS Excel, descriptive statistics using MS Excel (central tendency)

References:

- S. C. Gupta. (2000). Fundamentals of Statistics. Himalaya Publishing House. New Delhi.
- C. R. Kothari and G. Garg. (2010). Research Methodology Methods and Techniques, NEW AGE International Publishers Ltd. New Delhi.
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