

## STATISTICS AND RESEARCH METHODOLOGY

Paper no.- HSG – 305

ID -3

Credits -4 +0=4

Sem. – 3 (M.Sc. C.T.)

Marks – 100 +0= 100

### OBJECTIVES

- To understand the significance of statistics in Home science.
- To enable students to develop the ability to present and interpret the data in a research report or thesis.
- To expose the students to the various statistical techniques, to analyse and interpret data meaningfully.

### UNIT : 1

- Meaning of statistics, its History, Scope, Objectives, Uses, Classification and limitation of statistics in the field of Home science.
- Basic terms in statistics – population and sample, Data, Variables Types of variables and its control.
- Types of data – primary and secondary data and its methods of collecting data. Primary data, direct – personal observation. In direct – through agencies, information through agencies, Mailed Questionnaire, Secondary data, its application in various disciplines of Home science.

### UNIT : 2

- Classification and Tabulation of data – Introduction and Definition, Classification and its aims, Basics of classification, Types of classification, Tabulation – types of tabulation, Array and frequency distribution, Definition, Frequency table.

- Statistics and parameters, parametric and non parametric statistics, concept of population and sample. Advantages of sampling, Selection of sample.
- Methods of sampling, simple and random sampling, stratified and purposive sampling.

### **UNIT : 3**

- Processing of data – further understanding of variable, Nominal, Ordinal, Interval, Ratio, Derived variables – Ratio, Proportion, Rate.
- Diagrammatic and Graphical presentation of data – Bar charts, Multiple bar charts, Component bar charts, Pie charts, Histogram, Frequency polygon, Frequency curve or ogive, other types of charts.

### **UNIT : 4**

- An introduction to research – The scientific research and its application in the field of Home science. Selection and definition of a problem, writing research proposal and types of research.
- Research methods and procedure – The historical method and the descriptive method, the co - relational and the casual comparative method and experimental method.

### **REFERENCES**

1. Kapoor, V.K; Business Mathematics, Sultan chand and Suris Delhi.
2. Spiegel, M.R; Probability and statistics.
3. Elphence, D.N; Fundamentals of statistics.
4. Bhardvaj, R.S; Business statistics.
5. Kapoor and Sexsens; Fundamentals of statistics.
6. Shah, B.S ; ]Cctr Aa>kDaxaS □a pepr – 1.
7. Vohra, N.D; Quantitative Techniques in Management, Tata Mc Graw Hill, Ne w Delhi.

8. Chaudhary, C.N; Research Methodology, RBSA Publication, S.M.N.S. Highway, Jaipur, Raj. India.
9. Essentials of Agricultural Statistics, E.v. Divalcara Sastry, Pointer Publications, Jaipur, Raj. India.
10. A Handbook of Agricultural statistics, Dr. S.R.S. Chandel, Achal Prakashan Mandiv 117/574, Pandunagar, Kanpur – 208005