

**DISCIPLINE SPECIFIC ELECTIVE
(DSE-4A) (THEORY) (any one)
SEMESTER VIII
STATISTIC IN PHYSICAL EDUCATION & SPORTS**

Max. Marks = 100

Theory = 70 Marks + Internal Assessment = 30 Marks

BES-E801

Time allowed: 3Hrs

- CO-1.** State the Meaning and Definition of Statistics.
- CO-2.** Acquiring the knowledge of Parametric and non-parametric statistics.
- CO-3.** Estimating the Measures of Central Tendency.
- CO-4.** Acquiring the knowledge of Measures of Dispersions and Scales.
- CO-5.** Estimating the Calculation and advantages of various scales.
- CO-6.** Combining the data, statistical procedure and interpretation of data.

UNIT I – Introduction

Meaning and Definition of Statistics. Function, need and importance of Statistics. Types of Statistics. Meaning of the terms, Population, Sample, Data, types of data. Variables; Discrete, Continuous. Parametric and non-parametric statistics.

UNIT II – Data Classification, Tabulation and Measures of Central Tendency Meaning, uses and construction of frequency table. Meaning, Purpose, Calculation and advantages of Measures of central tendency – Mean, median and mode.

UNIT III – Measures of Dispersions and Scales Meaning, Purpose, Calculation and advances of Range, Quartile, Deviation, Mean Deviation, Standard Deviation, Probable Error. Meaning, Purpose, Calculation and advantages of scoring scales; Sigma scale, Z Scale, Hull scale

UNIT IV – Probability Distributions and Graphs Normal Curve. Meaning of probability - Principles of normal curve – Properties of normal curve. Divergence from normality – Skewness and Kurtosis. Graphical Representation in Statistics; Line diagram, Bar diagram, Histogram, Frequency Polygon, Ogive Curve. Inferential and Comparative Statistics Tests of significance; Independent “t” test, Dependent “t” test – chi – square test. level of confidence and interpretation of data. Meaning of correlation – co-efficient of correlation.

Note : It is recommended that the theory topics be accompanied with practical, based on computer software of statistics.

REFERENCE

Best J. W (1971) Research in Education, New Jersey; Prentice Hall, Inc Clark D.H. (1999) Research Problem in Physical Education 2nd edition, Eaglewood Cliffs, Prentice Hall, Inc. Jerry R Thomas & Jack K Nelson (2000) Research Methods in Physical Activities; Illonosis; Human Kinetics; Kamlesh, M. L. (1999) Research Methodology in Physical Education and Sports, New Delhi Rothstain A (1985) Research Design and Statistics for Physical Education, Englewood Cliffs: Prentice Hall, Inc Sivaramakrishnan. S. (2006) Statistics for Physical Education, Delhi; Friends Publication Thirumalaisamy (1998), Statistics in Physical Education, Karaikudi, Senthilkumar Publications.