1st Year 1st Semester

STAT 111- Basic Statistics-I
100 Marks: 03 Credits
Number of Class: 35-40

Statistics – Its History and Scope: History, Definition, Nature, Scope and Classification of Statistics, Limitation, Uses and Abuses of Statistics.

Data and Data Collection: Population, Sample, Variables and Attributes, Types of Variables, Scales of Measurement: Nominal, Ordinal, Interval and Ratio; Primary and Secondary Data, Methods of Collecting Data.

Organization of Data: Classification and Tabulation of Data, Frequency Distribution, Graphical Presentation of Data, Stem and Leaf Display, Dot Plot, Time Series Plot.

Measures of central Tendency: Mean Median, Mode, Geometric Mean, Harmonic Mean, Quantiles with their Graphical Presentation, Application of Measures of Central Tendency.

Measures of Dispersion: Absolute Measures of Dispersion: Range, Quartile Deviation, Mean Deviation, Variance and Standard Deviation. Relative Measures of Dispersion: Coefficient of Range, Coefficient of Quartile deviation, Coefficient of Mean Deviation and Coefficient of Variation. Five Number Summary, Box Plots and their Uses, Application of Different Measures of Dispersion.

Moments and Shape Characteristics of Distribution: Moments, Sheppard's Corrections for Grouping Error, Skewness and Kurtosis.

Text

1. Stuart, A. and Ord, J. K. (1994): *Kendall's Advanced Theory of Statistics*, *Vol 1*: *Distribution Theory*, 6th edition, A Hodder Arnold Publication.

References

1. Gupta, S.P. and Kapoor, V.K(2009): *Fundamentals of Mathematical Statistics,*11th edition, Sultan Chand &Sons.
2. Miller, I. and Miller, M. (2005): *Mathematical Statistics with Applications*, 7th edition, Pearson Education.
3. Shil, R.N. and Debnath, S.C.(2009): *An Introduction to the Theory of Statistics*, Latest edition.
4. K.C. Bhuyan (2011): *Methods of Statistics*, Sahitya Prokashani, Dhaka.
5. Yule, G.U. and Kendall, M.G. (1999): *An Introduction to the Theory of Statistics*, Universal Book Stall, New Delhi.
6. Mustafa, M. G.: *Methods of Statistics*.
7. Islam, M. N (2004): *An Introduction to Statistics and Probability*, 3rd edition, Mullick& Brothers.