Business Statistics & Quantitative Techniques

Duration- 2 Months

Introduction to Statistics:

- Collection of Data and Classification
- Measures of Central Tendency- Mean, Median, Mode
- Measures of Dispersion in Frequency Distribution- Variance, Standard Deviation

Theory of Probability:

- Total probability theorem (Addition Rule)
- Conditional probability, Multiplication & Baye's Theorem
- Introduction to Random Variables- Discrete and continuous RVs, p.m.f. and p.d.f., c.d.f., Expectation and Variance
- Bernouli's Trial, Binomial, Poisson and Normal Distribution

Bivariate Data Analysis:

- Covariance, Karl Pearson's Correlation Coefficient, Rank Correlation, Regression (linear)
- Least Square Curve Fitting- Linear and Non-linear

Test of Hypothesis:

- Introduction to Statistic
- Estimation of Parameters- Unbiased and Consistent Estimator
- Hypothesis Testing – Statistical Hypothesis, Null Hypothesis and Alternative Hypothesis; Type-I and Type-II Error, Level of Significance, Acceptance and Critical Region; Test for Single Mean & Two Means
- Test of Goodness of Fit- Chi-Square test
- F test – ANOVA

Tests:

- Index Numbers- Unweighted and Weighted-Test of Consistency
- Time Series Analysis- Measurement of Secular Trend-Seasonal Variations