

**Business Statistics****Paper-V MC-1.5****Max. Marks : 100****Time : 3 Hours**

*Note : There will be three sections of the question paper. In section A there will be 10 short answer questions of 2 marks each. All questions of this section are compulsory. Section B will comprise of 10 questions of 5 marks each out of which candidates are required to attempt any seven questions. Section C will be having 5 questions of 15 marks each out of which candidates are required to attempt any three questions. The examiner will set the questions in all the three sections by covering the entire syllabus of the concerned subject.*

**Course Inputs :****Unit-1 : Probability and Expected Value:**

**Probability theory:** Concepts of Probability; Different Approaches to Probability; Conditional Probability; Application of Addition and Multiplication Laws; Bayes Theorem and Inverse Probability; Mathematical Expectation.

**Unit-2 : Probability Distributions:**

**Probability Distributions:** Binomial Distribution; Poisson Distribution and Normal Distribution; Their Application to Business.

**Unit-3 Statistical Inference-Tests of Hypothesis:**

**Testing of Hypothesis:** Sampling Tests-Tests for Attributes; Chi-Square Test and Large Sample Tests .  
Sampling tests for small samples -'T'-test, 'Z'-test, and 'F'-test.

**Unit-4 Time Series Analysis and Statistical Quality Control:**

**Time Series Analysis:** The Concept of Time-series, Components of Time-series; Measurement of Trend (Linear and non-linear), Measurement of Seasonal Variations. Statistical Quality Control; Process Control- Control charts for Variables and Control Chart for Attributes; Product Control and Risk in Quality Control;

**Unit-5 Regression Analysis and Association of Attributes:**

**Regression Analysis:** Bivariate; Partial and Multiple Correlation and Regression (up to three variables)  
**Association of Attributes:** Criterion of Independence; Consistency of Data (two and three attributes)