

# **Economics**

## **Syllabus for Admission Test**

### **A. Syllabus Mathematics**

**Algebra:** Real numbers; AP & GP series; Binomial series; Permutations and Combinations; Row and column Vectors, Basic Vector algebra, Matrices and Determinants; Solving equations. Linear inequalities

**Functions and graphs:** Concept of relations, functions and graphs; types of functions; graphs of basic functions (linear, quadratic, polynomial, logarithmic, exponential, etc.)

**Coordinate Geometry:** Cartesian plane; Straight lines: Slope and intercept, intersection of lines; Concepts of circle, parabola, hyperbola and ellipse.

**Calculus:** Limits; Continuity, Differentiation; second order derivatives applications of derivatives (rates of change, concept of margin, increasing and decreasing function; maxima and minima), Integral Calculus: Estimating area under a curve, Integration by parts and by substitution; Definite and indefinite integrals; Differential equations.

**Set theory and probability:** Different types of sets, Operations of sets, Classical and axiomatic approach to probability; Conditional probability

**Elementary statistics:** Interpretation of tables and graphs (bar, histogram, line diagram, ogive etc.). Mean, median, mode and variance;

**Logical and quantitative analysis:** Number series; basic logical patterns; quantitative problem solving.

### **B. Syllabus English**

**Vocabulary and word usage:** Synonyms and antonyms, one word substitutions, idioms and phrases, collocations, word formation (prefixes and suffixes).

**Sentence structure and clarity:** Sentence completion, rearranging of sentences, identifying grammatically correct sentences, eliminating redundancy and ambiguity.

**Logical and analytical language skills:** Analogies, identifying relationships between words and ideas, cause-effect relationships expressed in language.

Business maths/applied maths will not be considered.