SYLLABUS FOR B.Ed- Information & Communication Technology (Computer Application)

Basic English Grammar, sentence structure, synonyms and antonyms, idioms and phrases, detecting misspelled words, comprehension

ANALYTICAL ABILITY AND LOGICAL REASONING

Series, Analogies, Relationships, Classification, Coding, Permutations and Combinations, Inference, Statement Analysis, Blood Relationships, Direction Sense, Profit and Loss, Averages, Percentages, Calender, Clock, Time and Work, Speed and Distance, Assertions, Rule Detection, Reasoning and Decision Making.

MATHEMATICS

Data Representation and Manipulation in Computers: binary and hexadecimal representations, binary arithmetic: addition, subtraction, multiplication, division, simple arithmetic and two's complement arithmetic, Boolean algebra, Truth tables,

Set Theory: Concepts of sets – Union, Intersection, Cardinality, Elementary

counting; permutations and combinations.

Probability and Statistics: Basic concepts of probability theory, Averages, Dependent

and independent events, frequency distributions, measures of central tendencies and

dispersions.

Algebra: Fundamental operations in algebra, expansions, factorization, simultaneous

linear /quadratic equations, indices, logarithms, arithmetic, geometric and harmonic

progressions, determinants and matrices.

Coordinate Geometry: Rectangular Cartesian coordinates, distance formulae,

equation of a line, and intersection of lines, pair of straight lines, equations of a circle, parabola, ellipse, and hyperbola.

Calculus: Limit of functions, continuous function, differentiation of function, tangents and normals, simple examples of maxima and minima. Integration of function by

parts, by substitution and by partial fraction; definite integrals, applications of

definite integrals to areas.

Matrices and Vectors: Matric Operations and Inverses, Position vectors, addition and subtraction of vectors, scalar and vector products and their applications to simple geometrical problems and mechanics.

Trigonometry: Simple identities, trigonometric equations properties of triangles,

solution of triangles, heights and distances, general solutions of trigonometric

Equations