

Entrance Syllabus: Bachelor of Computer Applications (BCA)

The questions in this paper will cover: Logical Reasoning, Quantitative Reasoning, Intermediate level Mathematics, Vocabulary, Intermediate level Computer Awareness, English Comprehension and Verbal Ability.

Mathematics:

Algebra: Fundamental Operations in Algebra, Expansion, Factorization, Quadratic Equations, Indices, Logarithms, Arithmetic, Geometric and Harmonic Progressions, Binomial Theorem, Permutations and Combinations;

Probability and Statistics : Basic concepts of Probability Theory, Averages, Frequency Distributions, and Measures of Dispersions and Skewness Binomial, Poisson, Normal Distributions, Curve Fitting, and Principle of Least Squares, Correlation and Regression.

Arithmetic: Ratios and Proportions, Problems on Time-Work, Distance-Speed, Percentage. Basic Set Theory and Functions: Set, Relations and Mappings.

Mensuration: Areas, Triangles and Quadrilaterals, Area and Circumference of Circles, Volumes and Surface Areas of Simple Solids such as Cubes, Spheres, Cylinders and Cones. Limits, Continuity and Differentiability, Differentiation, Application of Derivatives, Indefinite and Definite Integration, Differential Equations, Co-ordinates and Straight Lines, Circles, Conic Sections, Complex Numbers, Sequences and Series, Exponential and Log Series, Determinants and Matrices.

Analytical Ability, Logical Reasoning, General Knowledge and General Science General Aptitude: The main objective of this section is to assess the General Aptitude of the candidate to pursue Computer Application and Software Profession.

Computer Awareness:

Computer Basics: Organization of a Computer, Central Processing Unit (CPU), Structure of Instructions in CPU, Input / Output Devices, Computer Memory, Memory Organization, Back-up Devices. Operating System.

Data Representation: Representation of Characters, Integers and Fractions, Binary and Hexadecimal representations, Binary Arithmetic: Addition, Subtraction, Division, and Multiplication.

Logic Algebra: Boolean Algebra, Theorems, Switching Functions, Disjunctive and Conjunctive, Canonical forms of switching functions, Combinational and Sequential Circuits. Computer Architecture: Block Structure of Computers, Communication between Processor and I/O Devices, Interrupts.

Computer Language: Algorithms, Flow Chart, Control Structures, Design of Algorithm, Concepts of Low Level, Intermediate Level and High Level Language Programming in 'C'.

General English: Questions in this section will be designed to test the candidates' general understanding of the English language. There will be questions on the following topics: Comprehension, Vocabulary, Basic English Grammar (like usage of correct forms of verbs, prepositions and articles), Word power, Synonyms and Antonyms, Meanings of words and phrases, Technical writing.