

**KHWAJA MOINUDDIN CHISHTI LANGUAGE UNIVERSITY,
LUCKNOW**

**Syllabus of Master of Computer Application (MCA) Entrance Examination
for Admission – 2025**

It is divided into four sections: Section I covers Mathematics and Statistics, Section II focuses on Numerical Aptitude, Reasoning and Logical Deduction, Section III deals with English Comprehension and Verbal Ability, and Section IV addresses Computer Awareness.

Section-I

Mathematics and Statistics:

- **Set Theory:** Concept 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 functions by parts, by substitution and by partial fraction, definite integrals, applications of definite integrals to areas.
- **Vectors:** Position vector, addition and subtraction of vectors, scalar and vector products and their applications to simple geometrical problems and mechanics.
- **Measure of Central Tendency:** Mean, Median, and Mode.
- **Probability Theory**

Section-II

Numerical Aptitude: Numerical calculation, arithmetic, simple algebra, geometry and trigonometry, Interpretation of graphs, charts and tables.

- Arithmetical questions up to 10th standard
- Calculation of fraction, percentages, square roots etc.
- Profit & Loss and Interest calculations
- Data/Table analysis, Graph & Bar Diagram and Pie Chart analysis
- Questions related to common use of science (Physics)

Reasoning and Logical Deduction: Creative thinking, unfamiliar relationships, verbal reasoning, finding patterns trends and Assessment of figures & diagrams.

- Geometrical designs & Identification
- Selection of related letters / words / numbers / figures
- Identification of odd thing / item out from a group
- Completion of numerical series based on the pattern / logic

- Fill in the blanks of the series based on the numerical pattern and logic of the series
- Syllogisms (logic-based questions), Identification of logic & selection of correct answers based on the logic

Section-III

English Comprehension and Verbal Ability:

- Use of articles and prepositions
- . Idioms and phrases
- Synonyms & Antonyms
- Reading comprehension
- Expansion of an idea
- Sentence sequence (jumbled sentences)
- Completion of a sentence (with choices)
- Choice of appropriate word to fill in the blanks (with options)
- Abridging sentences/paragraph
- Technical Writing

Section-IV

Computer Awareness:

- **Computer Basics:** History and Organization of a computer, Central Processing Unit (CPU), input/output devices, computer memory devices.
- **Data Representation:** Representation of characters, integers and fractions, binary and hexadecimal representations, binary arithmetic: addition, subtraction, multiplication, division, simple arithmetic and two's complement arithmetic, floating point representation of numbers, Boolean algebra, Truth tables, Venn diagram.
- **Windows Operating Environment-** Features of MS – Windows, Control Panel, Taskbar, Desktop, Windows Application, Icons, Windows Accessories, Notepad, Paintbrush.
- **Internet**