

Syllabus for MCA:

The examination will be of duration three hours and will be conducted in OFFLINE mode. There will be two sections in the examination. There is no negative marking wrong answer.

Time: Three hours.

**Paper - 1: Mathematics (100 marks):**

60 MCQs (each bearing 1 marks) and 20 MCQs (each bearing 2 marks) will have to be answered

**Syllabus:**

(i) **Analytical Geometry** : Cartesian and polar coordinate; Straight line; Circle; Ellipse; Parabola; Hyperbola; Translation & Rotation of axes.

(ii) **Algebra** : Complex number, De Moivre's theorem, Solution of linear equations, Determinants, Matrices, Summation of signal series, Addition of vectors, Scalar and Vector products, Inequation, Sets and elements, Universal set, Empty set, Subsets, Venn diagram, Union and intersection of sets, Complements, Algebra of sets, Finite sets, Class of sets, Partitions, Cross product, Group, Ring and Field.

(iii) **Calculus**: Limit, Continuity, Differentiation; Maxima & minima; Taylor & Maclaruin's Series: Definite and indefinite integrals, First ana second order differential equation; Functions of several variables; Partial differentiation.

(iv) **Probability & Statistics** : Permutation, Combination; Probability; Probability distribution; Mean; Median; Mode; Standard Deviation; Correlation coefficient.

**Paper – 2: Aptitude test (100 marks):** 50 MCQs (each bearing 2 marks)

Syllabus:

(i) Reasoning, (ii) Problem Solving, (iii) Quantitative Comparison, (iv) Discrete Quantitative Analysis & (v) Data interpretation.