

**GURUKUL KANGRI VISHWAVIDYALAYA
HARIDWAR**

MASTER OF COMPUTER APPLICATIONS (MCA)

Eligibility :

Graduate (three years degree course) with minimum 50% marks and Mathematics as compulsory subject at the intermediate (10 + 2) level.

Age Limit :

Age limit will be 25 years (28 years for sponsored/NRI sponsored) as on 30 Sept.

Examination Pattern :

The entrance examination paper shall consist of 100 objective type questions.

SYLLABUS :

(A) Mathematics & Statistics [70 Marks]

Linear Algebra. Solution of simultaneous equations, addition and multiplication of matrices, computation of inverse and rank of matrix, vector spaces sub spaces, bases and dimensions, linear transformation.

Co-ordinate Geometry. Circles, tangent and normal, orthogonal circles, coaxial system of circles, parabola, ellipse and hyperbola, their equations in standard form and simple properties.

Differential and integral Calculus. Differentiation of algebraic, exponential and logarithmic functions, Application to simple problems of maxima and minima, partial differentiation of the functions of two variables, integration of functions by substitution, partial fractions, integration by parts. Definite integrals and their properties for finding areas, volumes and surfaces of simple curves, Simpson's and trapezoidal rules.

Differential and Difference Equations. Linear differential equation of first degree and first order, difference equations of first order.

Vector. Vector product of two vectors, scalar triple product and vector triple product, differentiation and integration of vectors.

Number System. Natural numbers, integers, rational and irrational numbers, complex and real numbers, binary numbers.

Statistics. Theory of probability, Averages dispersion, coefficient of variation, skewness, coefficient of correlation and interpolation, fitting of curves, method of least squares, Binomial, Poisson and normal distribution.

(B) Mental Ability. [15 Marks]

Series, figure, characters, words etc. matching and sequence completeness, logical functions, truth tables etc.

(C) General Awareness [15 Marks]

About current affairs and computers.

Test Centre : Dehradun, Delhi