

SYLLABUS MAH MCA CET 2023

Duration: 90 Mins, 100 Questions, 2 Marks Each, NO negative Marking,

Total Marks : 200M Exam Mode : Online Exam Pattern : MCQs

Marking Scheme : [Mathematics : 30 M, Logical Reasoning : 30M ,

Computer Fundamentals : 20 M, English: 20M]

1. Mathematics 30 Questions 2 Marks Each 60 Marks

Algebra: Fundamental operations in Algebra, Expansion, factorization, Quadratic equations, indices, logarithms, arithmetic, geometric and harmonic progressions, binomial theorem, permutations and combinations.

Coordinate Geometry: Rectangular Cartesian coordinates, equations of a line, midpoint, intersections etc., equations of a circle, distance formulae, pair of straight lines, parabola, ellipse and hyperbola, simple geometric transformations such as translation, rotation, scaling.

Differential Equations: Differential equations of the first order and their solutions, linear differential equations with constant coefficients, homogenous linear differential equations.

Trigonometry: Simple identities, trigonometric equations, properties of triangles, solution of triangles, height and distance, inverse function.

Probability and Statistics: Basic concepts of probability theory, Averages, Dependent and independent events, frequency distributions, and measures of dispersions, skewness and kurtosis, random variable and distribution functions, mathematical expectations, 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, etc.

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.

2.Logical Reasoning 30 Questions 2 Marks Each 60 Marks

This shall include the questions to measure how quickly and logically you can think. This section will cover logical situations and questions based on the facts given in the passage. This test shall check the problem-solving capability of the candidate.

3.Computer Concepts: 20 Questions 2 Marks Each 40 Marks

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.

Data Representation: Representation of characters, integers, and fractions, binary and hexadecimal representations, Binary Arithmetic: Addition, subtraction, division, multiplication, signed arithmetic and two's complement arithmetic, floating-point representation of numbers, normalized floating-point representation, Boolean algebra, truth tables, Venn diagrams.

Computer Architecture: Block structure of computers, communication between the processor and I / O devices, interrupts.

Computer Language: Assembly language & high-level language, Computer Programming in C
Operating System basics

4.English comprehension and verbal ability 20 Questions 2 Marks Each 40 Marks

Basic English Grammar, Vocabulary, Comprehension, Summary writing, Synonyms and Antonyms, Ordering of Sentences, Paragraph jumbles, Error Spotting