* **Computer Basics:** Organization of a computer, Central Processing Unit {CPU), Structure of instructions in CPU, input/ output devices, computer memory, memory organization, backup 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/ 0 devices, interrupts.
* **Computer Language:** Assembly language and high-level language, Multiprogramming and time-sharing operating systems, Computer Programming in C.
* **Operating System basics:** Multiprogramming and time sharing operating systems**.**

**Mathematics Syllabus for MAH MCA CET 2018:**

* **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, the pair of straight lines, parabola, ellipse and hyperbola, simple geometric transformations such as translation, rotation, scaling.
* **Differential Equations:** Differential equations of first order and their solutions, linear differential equations with constant coefficients, homogenous linear differential equations.
* **Trigonometry:** Simple identities, trigonometric equations, properties of triangles, the 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 the 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.