- Courses MCA-E-I and MCA-E-II are the Elective courses. Student has to choose one of the course from the elective courses each from MCA-E-I and MCA-E-II.
- Course MCA-P-I and MCA-P-II will have practical examination and rest of all will have theory examination.
- 30 days practical camp will be organized each for MCA-P-I and MCA-P-II. Minimum 75% attendance is compulsory in Practical Camps to appear in Practical Examination.
- MCA-P-I is composition of MCA-102, MCA-103, MCA-104, and MCA-E-I
- MCA-P-II is composition of MCA-201, and MCA-203
- The project shall be an integral part of MCA-P-II.

ELIGIBILITY FOR MCA PROGRAMME

The admission eligibility of MCA programme will be-

"Passed BCA/ Bachelor Degree in Computer Science Engineering or equivalent Degree.

OR

Passed B.Sc./ B.Com./ B.A. with Mathematics at 10+2 level or at Graduation Level (with additional bridge Courses as per the norms of the concerned University).

Obtained at least 50% marks (45% marks in case of candidates belonging to reserved category) in the qualifying Examination."

ADMISSION CRITERIA

1. The admission shall be made on merit decided on the basis of marks obtained in MCA Entrance Test organized by VMOU and the test score will remain valid for one year from the date of announcement of MCA Entrance Test result. University reserves the right to exempt the test or decide the cut off pass percentage for the admission. One who qualifies the MCA Entrance test will be required to fulfil the admission eligibility as mentioned above.

The structure of the MCA Entrance Test will be as follows:-

- All the questions will be of multiple choice question, where for each question four options will be given and candidate has to choose one correct option.
- There will be no negative marking

- The medium of MCA Entrance Test will be English only.
- Each question has a weightage of 1 mark.
- The section wise pattern of the exam is given below:

Section	Number of Questions	Total Marks
Elementary Computer Knowledge	30	30
Mathematical Ability	30	30
Reasoning and Aptitude	40	40

- The detailed syllabus of MCA Entrance Test is given in Appendix – A.
- The duration of test will be 120 minutes.
- Entrance Test fee will be 1000/-

Note: The Entrance Test will be conducted at selected cities of Regional Centers to be decided by the University. The model question paper and instructions are given in the **Appendix - A**.

REGISTRATION

(1) Admission Forms will be submitted only at the time of first entry to the Programme. Subsequent continuation in the programme will be through Promotion. Promotee Form or Re-registration form will be made available at the website of VMOU.

(2) In case the student does not qualify the courses within stipulated examination. he/she will have to apply for Term end Examination for those courses. The marks obtained in the qualifying courses will be carried forward. Examination fee will as per the prevalent Fee Structure at that time.

RESERVATION

The University follows Govt. policy in respect of reservation or seats in admission.

FEE STRUCTURE

The Fee for MCA Entrance Test is Rs. 1000/- (Rupees One thousand only) to be deposited in the Bank through e-Mitra or Online Banking. For Online Application and other details are available on University Website- vmou.ac.in

12. TEST COMPOSITION

Section	Number of Questions	Total Marks
Elementary Computer Knowledge	30	30
Mathematical Ability	30	30
Reasoning and Aptitude	40	40

Detailed Syllabus of MCA Entrance Test

Elementary Computer Knowledge

Computer Basics: Organization of a computer, Central processing Unit (CPU), structure of instructions in CPU, input/output devices, computer memory, back-up 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 table, venn diagrams.

Mathematical Ability

Set Theory: Concepts of sets- Union-Intersection-Cardinality-Elementary counting, permutation and combinations Probability and statistics: Basic Concept of Probability theory, Averages, Dependent and independent events, frequency distributions, measure 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 metrics . Coordinate Geometry: Rectangular, Cartesian coordinates, distance formulas, equation of line, inter section of line, pair of straight lines, equation of circle, parabola, ellipse and hyperbola. Calculus: Limit of functions, continuous functions, differentiations of functions, tangents and normal's, simple example of maxima and minima. Integration of function by parts, by substitutions, and by partial fraction: definite integrals, application 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. Trigonometry: simple Identities, trigonometric equations, properties of triangles, solutions of triangles, height and distances, general solution of trigonometric equations.

Reasoning and Aptitude

The question in this section will cover logical reasoning and quantitative aptitude. Some of the questions will be on comprehension of logical situation and questions based on the facts given in the passage.

Model Question Paper of MCA Entrance Test

SECTION – I

(Elementary Computer Knowledge)

1. UNIVAC is
   a) Universal Automatic Computer
   b) Universal Array Computer
   c) Unique Automatic Computer
   d) Unvalued Automatic Computer
2. The brain of any computer system is
   a) ALU
   b) Memory
   c) CPU
   d) Control unit
3. Storage capacity of magnetic disk depends on
   a) tracks per inch of surface
   b) bits per inch of tracks
   c) disk pack in disk surface
   d) All of above
4. Which of the following is not an input device?
   a) OCR
   b) Optical scanners
   c) Voice recognition device
   d) COM (Computer Output to Microfilm)
5. If in a computer, 16 bits are used to specify address in a RAM, the number of addresses will be
   a) 216
   b) 65,536
   c) 64K
   d) Any of the above
6. Instructions and memory address are represented by
   a) Character code
   b) Binary codes
   c) Binary word
   d) Parity bit

7. Mnemonic a memory trick is used in which of the following language?
    a) Machine language
    b) Assembly language
    c) High level language
    d) None of above
8. BCD is
    a) Binary Coded Decimal
    b) Bit Coded Decimal
    c) Binary Coded Digit
    d) Bit Coded Digit
9. Properly arranged data is called
    a) Field
    b) Words
    c) Information
    d) File
10. Algorithm and Flow chart help us to
    a) Know the memory capacity\
    b) Identify the base of a number system
    c) Direct the output to a printer
    d) Specify the problem completely and clearly

SECTION – II

(Mathematical Ability)

1. A _____ is an ordered collection of objects.
    a) Relation
    b) Function
    c) Set
    d) Proposition
2. The set O of odd positive integers less than 10 can be expressed by _____
    a) {1, 2, 3}
    b) {1, 3, 5, 7, 9}
    c) {1, 2, 5, 9}
    d) {1, 5, 7, 9, 11}
3. What is the Cartesian product of A = {1, 2} and B = {a, b}?
    a) {(1, a), (1, b), (2, a), (b, b)}
    b) {(1, 1), (2, 2), (a, a), (b, b)}
    c) {(1, a), (2, a), (1, b), (2, b)}
    d) {(1, 1), (a, a), (2, a), (1, b)}

4. If a, b, c are in AP then relation between a, b, c can be
   a) 2b = 2a + 3c
   b) 2a = b + c
   c) 2b = a + c
   d) 2c = a + c
5. Which of the following statements regarding sets is false?
   a) A X B = B X A
   b) A X B ≠ B X A
   c) n(A X B) = n(A) * n(B)
   d) All of the mentioned
6. Vertex of an angle in standard form is at
   a) (1,0)
   b) (0,1)
   c) (1,1)\
   d) (0,0)
7. 1 radian =
   a) 57°17′45″
   b) 1°
   c) 180°
   d) 180′
8. The equation circle x2 + y2 – 4x + 2y – 20 = 0 describes:
   a) A circle of radius 5 centered at the origin.
   b) An eclipse centered at (2, -1).
   c) A sphere centered at the origin.
   d) A circle of radius 5 centered at (2, -1).
9. The focus of the parabola y2 = 16x is at
   a) (4, 0)
   b) (0, 4)
   c) (3, 0)
   d) (0, 3)
10. The roots of the equation 3x2 - 12x + 10 = 0 are?
    a) rational and unequal
    b) complex
    c) real and equal
    d) irrational and unequal

SECTION – III

(Reasoning and Aptitude)

1. In the first 10 overs of a cricket game, the run rate was only 3.2. What should be the run rate in the remaining 40 overs to reach the target of 282 runs?
   a) 6.25
   b) 6.5

c) 6.75
d) 7

2. It was Sunday on Jan 1, 2006. What was the day of the week Jan 1, 2010?
   a) Sunday
   b) Saturday
   c) Friday
   d) Wednesday
3. Six bells commence tolling together and toll at intervals of 2, 4, 6, 8 10 and 12 seconds respectively. In 30 minutes, how many times do they toll together?
   a) 4
   b) 10
   c) 15
   d) 16
4. The sum of ages of 5 children born at the intervals of 3 years each is 50 years. What is the age of the youngest child?
   a) 4 years
   b) 8 years
   c) 10 years
   d) None of these
5. Seats for Mathematics, Physics and Biology in a school are in the ratio 5 : 7 : 8. There is a proposal to increase these seats by 40%, 50% and 75% respectively. What will be the ratio of increased seats?
   a) 2 : 3 : 4
   b) 6 : 7 : 8
   c) 6 : 8 : 9
   d) None of these
6. Two pipes A and B can fill a cistern in 37 minutes and 45 minutes respectively. Both pipes are opened. The cistern will be filled in just half an hour, if the B is turned off after:
   a) 5 min.
   b) 9 min.
   c) 10 min.
   d) 15 min.
7. A can do a work in 15 days and B in 20 days. If they work on it together for 4 days, then the fraction of the work that is left is :
   a) 1/4
   b) 1/10
   c) 7/15
   d) 8/15
8. A train running at the speed of 60 km/hr crosses a pole in 9 seconds. What is the length of the train?

a) 120 metres
b) 180 metres
c) 324 metres
d) 150 metres

9. A sum of money at simple interest amounts to Rs. 815 in 3 years and to Rs. 854 in 4 years. The sum is:
   a) Rs. 650
   b) Rs. 690
   c) Rs. 698
   d) Rs. 700
10. The cost price of 20 articles is the same as the selling price of x articles. If the profit is 25%, then the value of x is:
    a) 15
    b) 16
    c) 18
    d) 25