

**Fergusson College(Autonomous), Pune – 4**

**Department of Computer Science**

**M.Sc. Data Science**

**Syllabus for M.Sc. Data Science Entrance Test**

- **Basics of Mathematics:** Matrices, Graphs, Set theory, series and sequences, logic, functions.
- **Basics of statistics:** Counting Principles, Probability, Permutations and Combinations.
- **Mathematical Aptitude**  
Number system, H.C.F. and L.C.M. Of numbers , decimal fractions , simplification , square roots and cube roots, average, problems on numbers, problems on ages, surds and indices, logarithms, percentage, profit and loss , ratio and proportion, partnership , chain rule, pipes and cisterns, time and work , time and distance , boats and streams, problems on trains, allegation or mixture , simple interest, compound interest, area, volume and surface area, races and games of skill, calendar, clocks, stocks and shares, permutations and combinations, probability, true discount, banker's discount, heights and distances, odd man out and series, set theory
- **Verbal reasoning**  
Analogy, Classification, Series completion, Coding- decoding, Blood relation, Puzzle test, Sequential output tracing, Direction sense test, Logical Venn diagrams, Alphabet test, Number, ranking and time sequence test, Mathematical operation, Logical sequence of words, Arithmetical reasoning, Inserting the missing character, Data sufficiency, Decision making, Assertion and reason, Situation reaction test, Verification of truth of the statement, data interpretation
- **Non-Verbal Reasoning**  
Construction of Squares & Triangles, Rule Detection, Mirror Images & Water Images, Figure Formation & Analysis, Series, Completing Incomplete Pattern, Paper Folding, Analogy, classification, Analytical Reasoning, Cubes & Dice etc.