MA101.3
Mathematics for Computing
22.1 Paper Structure

Question 1 – (Number Systems, Set Theory, Propositional Logic, Matrices, Coordinate Geometry)

- 10 short questions weights 2 marks each to set 20 marks
- Five questions from number systems
- Five questions from other remaining lessons

Question 2 – Set Theory (20 Marks)

- Set equality
- Membership relationships
- Set Operations-
- Union, Intersection, Complement and Difference
- Venn Diagrams
- DeMorgan's Laws for sets
- Set partition
- Cardinality, Power set, Relations, Cartesian product, Functions

Question 3 – Propositional Logics (20 Marks)

- Logical Operations
- Truth Tables
- Examples using Truth Tables
- Tautology
- Contradiction
- Contingent Proposition
- Tautology/Contradiction Examples

Question 2 – Matrices (20 Marks)

- Different types of matrices
- Matrix Operations
- Solving a System of Linear Equations using Matrix Inversion

Question 2 – Coordinate Geometry (20 Marks)

- Parallel lines
- Perpendicular lines
- Distance between two points

- Mid point between two points
- Perpendicular Distance from a point to a line
- Equation of a circle
- Polar Coordinates