Program	BACHELOR OF VOCATION (B.Voc.)	**Semester - 2**
Type of Course	-	
Prerequisite		
Rationale	-	
Effective From A.Y.	2024-25	

Teaching Scheme (Contact Hours)				Examination Scheme				
				Theory Marks		Practical Marks		Total Marks
Lecture	Tutorial	Lab	Credit	SEE T	IAT	SEE P	CCE	
3	1	-	4	50	-	-	20	70

***SEE** - Semester End Examination, **IAT** - Internal Assessment Test, **CCE** - Continues & Comprehensive Evaluation*

Course Content

T - Teaching Hours | **W** - Weightage

Sr.	Topics	T	W
1	**Set, Function and Relation** Introduction, Set - Representation, Operation and its properties, Venn Diagram, Cartesian Product, Function – Definition, Domain, Range, Construction and functions, Relations, Trigonometric Functions	8	20
2	**Algebra** Complex Numbers, Quadratic Equation and linear inequalities, Permutations and Combinations	6	15
3	**Vector and Matrices** Vector, Dot Product, Scalar multiplication, Determinants, Straight line, Matrices of order m×n , Row and Column transformation, Matrices operation – Addition, Subtraction, Multiplication, Inverse, Transpose.	9	20
4	**Statistics and Probability** Measures of Dispersion, Random Experiments and Events, Probability	5	10
5	**Boolean Algebra** Definition & Examples of Boolean Algebra, De-Morgan 's Law, Truth Tables, Boolean Functions, Representation and minimization of Boolean Functions, Design example using Boolean algebra	8	20
6	**Basics of Graph Theory** Definition of Graph, degree of vertex Multigraph, Subgraph, Connected Components, Cut points and Bridges, Complete Graph, Regular Graph, Bipartite Graph	6	15
	Total	42	100

Suggested Distribution Of Theory Marks Using Bloom's Taxonomy

Level	Remembrance	Understanding	Application
Weightage	10	15	25

NOTE : This specification table shall be treated as a general guideline for the students and the teachers. The actual distribution of marks in the question paper may vary slightly from above table.

Course Outcomes

At the end of this course, students will be able to:	
CO1	Use the concepts of discrete mathematics in computer science.
CO2	Apply the concept of complex numbers and Graph Theory.
CO3	Perform matrix computation in a comprehensive manner and understand vector and algebra.
CO4	Find probability and basic statistics from data.
CO5	Implement fundamentals of Boolean algebra.