

## S. Y. B.SC. COMPUTER SCIENCE SEM- I

### I) Computer Science Paper I CS-211: Data Structures using 'C

CO1	To learn the systematic way of solving problem
CO2	To understand the different methods of organizing large amount of data
CO3	To efficiently implement the different data structures
CO4	To efficiently implement solutions for specific problems

### II) Computer Science Paper II CS-212: Relational Database Management System

CO1	To teach fundamental concepts of RDBMS (PL/PgSQL)
CO2	To teach principles of databases
CO3	To teach database management operations
CO4	To teach data security and its importance
CO5	To teach client server architecture

### III) Electronics Paper - I: Digital System

CO1	To study the applications of logic gates.
CO2	To use K-maps for digital circuit design.
CO3	To study and understand basics of microprocessors
CO4	To understand fundamentals of multicore technology

### IV) Electronics Paper-II: Communication Principles

CO1	To understand basics of communication systems.
CO2	To understand modulation, demodulation and multiplexing of signals
CO3	To understand digital communication techniques
CO4	To introduce concepts in advanced wireless communication.

### V) Mathematics Paper-I Linear Algebra

CO1	To understand the concept of vector spaces in various branches of engineering
CO2	To understand the concept of linear dependent and independent vectors
CO3	To develop the techniques of coding theory for detecting and correcting errors in the transmitted data.
CO4	To understand the concept of linear transformation.

### III) Mathematics Paper -II-Numerical Methods

CO1	To apply numerical methods and techniques in order to process the information and draw the relevant conclusion.
CO2	To calculate various real life problems using Numerical techniques
CO3	To apply their mathematical tools and techniques to solve practical problems

## S. Y. B.SC. COMPUTER SCIENCE SEM -II

### I) Object Oriented Concepts using C++

CO1	To acquire an understanding of basic object oriented concepts and the issues involved in effective class design .
CO2	To write C++ programs that use object oriented concepts such as information hiding, constructors, destructors, inheritance etc.

### II)Software Engineering

CO1	To teach basics of System Analysis and Design.
CO2	To teach principles of Software Engineering
CO3	To teach various process models used in practice
CO4	To know about the system engineering and requirement engineering
CO5	To build analysis model

### III)Electronics Paper-I: The 8051 Architecture, Interfacing &Programming

CO1	To study the basics of 8051 microcontroller
CO2	To study the Programming and interfacing techniques of 8051
CO3	To apply knowledge of 8051 to design different application circuits
CO4	To introduce the basic concepts of advanced Microcontrollers

### IV)Electronics Paper-II: Analog Systems

CO1	To understand basics of analog electronics
CO2	To study different types of sensors
CO3	To understand different types of signal conditioning circuits
CO4	To learn data conversion techniques
CO5	To apply knowledge of analog systems in different applications

### V) Computational Geometry

CO1	To apply their knowledge of geometry and vector in graphics.
CO2	To use of 2 dimensional and 3 dimensional transformation in the respective

	applied science.
CO3	To use their knowledge recognize basic geometrical figures and graphical displays , state important facts resulting from their studies.

#### VI)Operational Research

CO1	To use their knowledge and skills in creative ways to solve complex problems and have an impact on critical decisions
CO2	To <i>apply</i> tools and techniques and use a logical process to analyze and solve problems.
CO3	To do optimization of limited resources.
CO4	To understand the concept of Transportation problems & its applications in Real life problems.
CO5	To use L.P.P. and its applications in business

#### VII) English

CO1	To develop communication skills.
CO2	To develop proficiency in English.
CO3	To encourage to read various types of their own
CO4	To enable students for self-learning.