



**PRAHLADRAI DALMIA LIONS COLLEGE
OF COMMERCE & ECONOMICS**

ISO 9001 : 2015 Certified

NOTICE

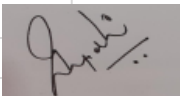
B.Sc.(Information Technology)

22-01-2025

S.Y.B.Sc.(T.T.) Sem IV & T.Y.B.Sc.(I.T.) Sem VI PCT Examination Syllabus FEBRUARY - 2025

SR. NO.	NAME OF THE FACULTY	SEM	SUBJECT	MODULE	TOPICS COVERED
1	Sujal Shah	IV	Computer Oriented Statistical Techniques	UNIT 1	Averages, Deviations
2	Prathamesh Bhosle	IV	Software Engineering	UNIT 1	Introduction: What is software engineering? Software Development Life Cycle, Requirements Analysis, Software Design, Coding, Testing, Maintenance etc. Software Requirements: Functional and Non-functional requirements, User Requirements, System Requirements, Interface Specification, Documentation of the software requirements. Software Processes: Process and Project, Component Software Processes. Software Development Process Models. ☐ Waterfall Model. ☐ Prototyping. ☐ Iterative Development. ☐ Rational Unified Process. ☐ The RAD Model ☐ Time boxing Model. Agile software development: Agile methods, Plan-driven and agile development, Extreme programming, Agile project management, Scaling agile methods.
3	Mansi Karnik	IV	Computer Graphics and Animation	UNIT 1	Introduction to Computer Graphics: Overview of Computer Graphics, Computer Graphics Application and Software, Description of some graphics devices, Input Devices for Operator Interaction, Active and Passive Graphics Devices, Display Technologies, Storage Tube Graphics Displays, Calligraphic Refresh Graphics Displays, Raster Refresh (Raster-Scan) Graphics Displays, Cathode Ray Tube Basics, Color CRT Raster Scan Basics, Video Basics, The Video Controller, Random-Scan Display Processor, LCD displays. Scan conversion – Digital Differential Analyzer (DDA) algorithm, Bresenhams’ Line drawing algorithm. Bresenhams’ method of Circle drawing, Midpoint Circle Algorithm, Midpoint Ellipse Algorithm, Mid-point criteria, Problems of Aliasing, end-point ordering and clipping lines, Scan Converting Circles, Clipping Lines algorithms– Cyrus-Beck, Cohen-Sutherland and Liang-Barsky, Clipping Polygons, problem with multiple components

4	chirag Deora	IV	Introduction to Embedded Systems	UNIT 1	PIC MICROCONTROLLER: Architecture – memory organization – addressing modes – instruction set – PIC programming in Assembly & C –I/O port, Data Conversion, RAM & ROM Allocation, Timer programming Advanced ARM Controllers: Introduction to ARM and its Features, Architecture – memory organization – addressing modes –The ARM Programmer’s model -Registers – Pipeline - Interrupts – Coprocessors Interrupt Structure
5	Prathamesh Bhosle	IV	Core Java	UNIT 1	Introduction: History, Features of Java, Java Development Kit, Java Application Programming Interface, Java Virtual Machine, Java Program Structure. Classes: The Class Object and Its Attributes, Class Methods, Accessing A Method, Method Overloading, Instantiating Objects from A Class, Constructors, this keyword, super keyword, Types of Classes, Scope Rules, Access Modifier, constants, static members of a class, garbage collection. Inheritance: Derived Class Objects, Inheritance and Access Control, Default Base Class Constructors, this and super keywords. Abstract Classes and Interfaces, Abstract Classes, Abstract Methods, Interfaces: What Is an Interface? How Is an Interface Different from An Abstract Class? Multiple Inheritance, Defining an Interface, Implementing Interfaces.
6	Rupali Mishra	VI	Software Testing and Quality Assurance	UNIT 1	Historical Perspective of Quality, What is Quality? (Is it a fact or perception?), Definitions of Quality, Core Components of Quality, Total Quality Management (TQM), Quality Principles of Total Quality Management, Continual AND Continuous Improvement Cycle Benchmarking and Metrics, Problem Solving Techniques, Constraints of Software Product Quality Assessment, Requirements of a Product, Organisation Culture, Characteristics of Software, Types of Products, Software Quality Management, Why Software Has Defects? Processes Related to Software Quality, Quality Management system Structure, Pillars of Quality Management System
7	Sujal Shah	VI	Information Security	UNIT 1	Risk analysis, Security principles
9	Niyati Kalyanpur	VI	Fundamentals of GIS	UNIT 1	Gentle Introduction to GIS The nature of GIS: Some fundamental observations, Defining GIS, GISystems, GIScience and GIApplications, Spatial data and Geoinformation. The real world and representations of it: Models and modelling, Maps, Databases, Spatial databases and spatial analysis Geographic Information and Spatial Database Models and Representations of the real world Geographic Phenomena: Defining geographic phenomena, types of geographic phenomena, Geographic fields, Geographic objects, Boundaries Computer Representations of Geographic Information: Regular tessellations, irregular tessellations, Vector representations, Topology and Spatial relationships, Scale and Resolution, Representation of Geographic fields, Representation of Geographic objects The Temporal Dimension

10	Prathamesh Bhosle	VI	IT Act and Cyber Laws	UNIT 1	Power of Arrest Without Warrant Under the IT Act, 2000: A Critique, Crimes of this Millennium, Section 80 of the IT Act, 2000 – A Weapon or a Farce? Forgetting the Line Between Cognizable and Non-Cognizable Offences, Necessity of Arrest without Warrant from Any Place, Public or Otherwise, Check and Balances Against Arbitrary Arrests, Arrest for “About to Commit” an Offence Under the IT Act: A Tribute to Draco, Arrest, But NO Punishment! Cyber Crime and Criminal Justice: Penalties, Adjudication and Appeals Under the IT Act, 2000: Concept of “Cyber Crime “ and the IT Act , 2000, Hacking, Teenage Web Vandals, Cyber Fraud and Cyber Cheating, Virus on the Internet, Defamation, Harassment and Email Abuse, Cyber Pornography, Other IT Act Offences, Monetary Penalties, Adjudication and Appeals Under IT Act , 2000, Network Service Providers, Jurisdiction and Cyber Crime, Nature of Cyber Criminality, Strategies to Tackle Cyber Crime and Trends, Criminal Justice in India and Implications on Cyber Crime
					
					
Dr. Rupali Mishra		Ms. Subhashini Naikar		Prof. (Dr.) Digambar Ganjewar	
Coordinator		Vice Principal (SFC)		Principal	
DI/N-STD/GEN/00					