Prahladrai Dalmia Lions College of Commerce & Economics

ISO 21001:2018 Certified

BSc.(Information Technology)

Syllabus for Class Test, (CIA), AUGUST, 2025 B.Sc.I.T.

Semester I (NEP), III (NEP) and V

Date - 24/7/2025

SR. NO.	NAME OF THE FACULTY	SEM	SUBJECT	TOPICS COVERED
1	Ms. Sonia	I	Programming with C (15 marks)	1. Introduction: Algorithms, History of C, Structure of C Program.Program Characteristics, Compiler, Linker and preprocessor, pseudo code statements and flowchart symbols, Desirable Execution of a Program, C Character Set, identifiers and keywords, data types and sizes, constants and its types, variables, Character and character strings, typedef, typecasting . 2. Type of operators: Arithmetic operators, relational and logical operators, Increment and Decrement operators, assignment operators, the conditional operator, Assignment operators and expression, Precedence and order of Evaluation Block Structure, Initialization, C Preprocessor
2	Ms. Mona	I	Indian Knowledge System	Introduction to IKS, Why IKS Scope of IKS,, tradition of IKS, Relevance site on the vicinity of the institute
3	Neeti joshi	I	Environmental management & sustainable development	Introduction ,History and Structure of Ecosystem
4	Ms. Mona	I	Entrepreneurship Management (5Marks)	Introduction to Entrepreneurship, concept, factors, scope, importance, types, women entrepreneurs, meaning of social entrepreneurship
5	Ms. Sonia	I	Database Management System (15 marks)	1. Introduction to Databases and transactions, What is database system, purpose of database system, view of data, relational databases, database architecture, transaction management. 2. Data models : The importance of data models, Basic building blocks, Business rules, The evolution of data models, Degrees of data abstraction 3. Database Design, ER-Diagram Database design and ER Model: overview, ER-Model, Constraints,
6	Ms. Malvika	I	Indian Constitution	Module 1-Significance,Need, Importance, Sources ,Features,Basic structure and preamble of Indian Constitution
7	Ms. Niyati	III	Python Programming	Features of Python, Execution of a Python Program, Python Interpreter, Comments, IDLE, Data types, Dictionary, Sets, Mapping, Basic Elements of Python, Variables, Input Function, Output Statements, Command Line Arguments. Operators, Precedence of Operators, Associativity of Operators Control Statements: The if statement, The if … else Statement, The if … elif … else Statement, Loop Statement - while loop, for loop, Infinite loop, Nested loop, The else suite, break statement, continue statement, pass statement, assert statement, return statement.
8	Ms. Neha	III	Psychology of Digital Influence	Module -1 Understanding digital influence in everyday life a) Your Online Persona: The Psychology of Impression Management i. Online Self-presentation ii. Self-presentation Strategies iii. Forming Impression Online and Offline iv. Looking through a Lens

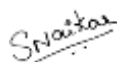|				v. Impression Formation on Personal Website and Social Networks vi. Are We Becoming More Narcissistic
9	Mr. Prathamesh	III	Data Structures	Introduction to Data structures - Basic terminology: data, information, data structure, abstract data type (ADT) Classification of data structures: linear, non-linear Algorithm analysis: time complexity, Big O notation , Arrays - Array representation and operations (traversal, insertion, deletion, searching) , Stacks - Stack ADT: push, pop, peek operations Array implementation of stacks Applications of stacks: expression evaluation (infix to postfix conversion), Recursion - Concept of recursion, base case, recursive step Examples: factorial, Fibonacci sequence Tower of Hanoi problem, Searching - Linear and Binary Search, Comparison of Both the searching algorithms and Sorting Algorithms -
10	Mr. Sujal	III	Applied Mathematics - 15 marks	Complex Numbers, Lalplace Transforms, properties of LT
11	Ms. Sonia	III	Operating Systems (15 marks)	Operating System Overview: Basics of operating systems: Generations, Types, Structure, Services, System Calls, System Boot, System Programs, Protection and Security. Process Management: Process Concepts, Process States, Process Control Block, Scheduling-Criteria, Scheduling Algorithms and their Evaluation, Threads, Threading Issues.
12	Dr. Rupali Mishra	V	Advanced Web Development	.NET Technology and Framework, C#, VB, and the .NET Languages, The Common Language Runtime, The .NET Class Library. The C# Language: C# Language Basics, Variables and Data Types, Variable Operations, Object-Based Manipulation, Conditional Logic, Loops, Methods. Types, Objects, and Namespaces: The Basics About Classes, Building a Basic Class, Value Types and Reference Types, Understanding Namespaces and Assemblies, Advanced Class Programming.
13	Mr. Prathamesh	V	Advanced Java Technologies	Understanding Java EE: What is an Enterprise Application? What is java enterprise edition? Java EE Technologies, Java EE evolution, Glassfish server Java EE Architecture, Server and Containers: Types of System Architecture, Java EE Server, Java EE Containers. Introduction to Java Servlets: The Need for Dynamic Content, Java Servlet Technology, Why Servlets? What can Servlets do? Servlet API and Lifecycle: Java Servlet API, The Servlet Skeleton, The Servlet Life cycle, A Simple Welcome Servlet Working with Servlets: Getting Started, Using Annotations Instead of Deployment Descriptor. Working with Databases: What Is JDBC? JDBC Architecture, Accessing Database, The Servlet GUI and Database Example.
14	Mr. Sujal	V	Artificial Intelligence & Applications	Foundation of AI, Agents, Environment, Nature of environment, structure of Agent
15	Ms Niyati	V	Software Project Development	Introduction to Software Project Management: Introduction, Why is Software Project Management Important? What is a Project? Software Projects versus Other Types of Project, Contract Management and Technical Project Management, Activities Covered by Software Project Management, Plans, Methods and Methodologies, Some Ways of Categorizing Software Projects, Project Charter, Stakeholders, Setting Objectives, The Business Case, Project Success and Failure, What is Management? Management Control, Project Management Life Cycle, Traditional versus Modern Project Management Practices. Project Evaluation and Programme Management: Introduction, Business Case, Project Portfolio Management, Evaluation of Individual Projects, Cost–benefit Evaluation Techniques, Risk Evaluation, Programme Management, Managing the Allocation of Resources within Programmes,

				Strategic Programme Management, Creating a Programme, Aids to Programme Management, Some Reservations about Programme Management, Benefits Management. An Overview of Project Planning: Introduction to Step Wise Project Planning, Step 0: Select Project, Step 1: Identify Project Scope and Objectives, Step 2: Identify Project Infrastructure, Step 3: Analyse Project Characteristics, Step 4: Identify Project Products and Activities, Step 5: Estimate Effort for Each Activity, Step 6: Identify Activity Risks, Step 7: Allocate Resources, Step 8: Review/Publicize Plan, Steps 9 and 10: Execute Plan/Lower Levels of Planning
16	Ms. Trupti	V	Internet of things:theory & practice	The Internet of Things: An Overview : The Flavour of the Internet of Things, The "Internet" of "Things", The Technology of the Internet of Things, Enchanted Objects, Who is Making the Internet of Things? Design Principles for Connected Devices: Calm and Ambient Technology, Magic as Metaphor, Privacy, Keeping Secrets, Whose Data Is It Anyway? Web Thinking for Connected Devices, Small Pieces, Loosely Joined, First-Class Citizens On The Internet, Graceful Degradation, Affordances. Internet Principles: Internet Communications: An Overview, IP, TCP, The IP Protocol Suite (TCP/IP), UDP, IP Addresses, DNS, Static IP Address Assignment, Dynamic IP Address Assignment, IPv6, MAC Addresses, TCP and UDP Ports, An Example: HTTP Ports, Other Common Ports, Application Layer Protocols, HTTP, HTTPS: Encrypted HTTP, Other Application Layer Protocols.

Dr. Rpuali Mishra
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CA. Durgesh Kenkre
Exam Convener

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Prof.(Dr). D.N.Ganjewar
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