



**COMMON ANNUAL EXAMINATION (2024-2025)**

**SYLLABUS**

**CLASS: XI**

**SUBJECT: INFORMATICS PRACTICES**

**TEXTBOOKS:**

**1. INFORMATICS PRACTICES -XI (NCERT)**

**2. INFORMATICS PRACTICES -XI (SUMITA ARORA)**

S.NO.	UNIT/CHAPTER /TOPIC	SUBTOPICS	WEIGHTAGE (MARKS)
1	Introduction to computer system	<ul style="list-style-type: none"><li>• Introduction to computer and computing: evolution of computing devices, components of a computer system and their interconnections, Input/output devices.</li><li>• Computer Memory: Units of memory, types of memory – primary and secondary, data deletion, its recovery and related security concerns.</li><li>• Software: purpose and types – system and application software, generic and specific purpose software</li></ul>	10
2	Introduction to Python	<ul style="list-style-type: none"><li>• Basics of Python programming, execution modes: - interactive and script mode, the structure of a program, indentation, identifiers, keywords, constants, variables, types of operator, precedence of operators, data types, mutable and immutable data types, statements, expression evaluation. comments, input and output statements, data type conversion, debugging.</li><li>• Control Statements: if-else, if-elif-else, while loop, for loop</li><li>• Lists: list operations - creating, initializing, traversing and manipulating lists, list methods and built-in functions – len(),list(),append(),insert(), count(),index(),remove(), pop(), reverse(), sort(), min(),max(),sum()</li></ul>	25

		<ul style="list-style-type: none"> <li>• Dictionary: concept of key-value pair, creating, initializing, traversing, updating and deleting elements, dictionary methods and built-in functions – dict(), len(), keys(), values(), items(), update(), del, clear()</li> </ul>	
3	Database concepts and the Structured Query Language	<ul style="list-style-type: none"> <li>• Database Concepts: Introduction to database concepts and its need, Database Management System.</li> <li>• Relational data model: Concept of domain, tuple, relation, candidate key, primary key, alternate key Advantages of using Structured Query Language,</li> <li>• Data Definition Language, Data Query Language and Data Manipulation Language, Introduction to MySQL, creating a database using MySQL, Data Types</li> <li>• Data Definition: CREATE DATABASE, CREATE TABLE, DROP, ALTER</li> <li>• Data Query: SELECT, FROM, WHERE with relational operators, BETWEEN, logical operators, IS NULL, IS NOT NULL</li> <li>• Data Manipulation: INSERT, DELETE, UPDATE</li> </ul>	30
4	Introduction to Emerging Trends	<ul style="list-style-type: none"> <li>• Artificial Intelligence, Machine Learning, Natural Language Processing, Immersive experience (AR, VR), Robotics, Big data and its characteristics, Internet of Things (IoT), Sensors, Smart cities, Cloud Computing and Cloud Services (SaaS, IaaS, PaaS); Grid Computing, Block chain technology.</li> </ul>	5
		<b>TOTAL MARKS= 70</b>	