

1. Subject: Informatics Practices XI (2023-2024)

2. Objectives

1. Identify the components of computer system.
2. Create Python programs using different data types, lists and dictionaries.
3. Understand database concepts and Relational Database Management Systems.
4. Retrieve and manipulate data in RDBMS using Structured Query Language
5. Identify the Emerging trends in the fields of Information Technology

3. Month wise division of syllabus

Lesson No./Topic	Name of the lesson	Month
Unit 2: Introduction to Python	Basics of Python programming, Python interpreter - interactive and script mode, the structure of a program, indentation, identifiers, keywords, constants, variables, types of operators, precedence of operators, data types, mutable and immutable data types, statements, expressions, evaluation and comments, input and output statements, data type conversion	April
	Control Statements: if-else, if-elif-else, while loop, for loop	May
Unit 2: Introduction to Python	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() Dictionary: concept of key-value pair, creating, initializing, traversing, updating and deleting elements	July
Unit 2: Introduction to Python	Dictionary methods and built-in functions – dict(), len(), keys(), values(), items(), update(), del(), clear()	August
Unit 3: Database concepts and the Structured Query Language Database	Data Definition: CREATE DATABASE, CREATE TABLE, DROP, ALTER Data Query: SELECT, FROM, WHERE with relational operators, BETWEEN, logical operators, IS NULL, IS NOT NULL Data Manipulation: INSERT, DELETE,UPDATE	
Unit 3: Database concepts and the Structured Query Language Database	Concepts: Introduction to database concepts and its need, Database Management System. Relational data model: Concept of domain, tuple, relation, candidate key, primary key, alternate key Advantages of using Structured Query Language, Data Definition Language, Data Query Language and Data Manipulation Language, Introduction to MySQL, creating a database using MySQL, Data Types	October
Unit 4: Introduction to the Emerging Trends	Artificial Intelligence, Machine Learning, Natural Language Processing, Immersive experience (AR, VR), Robotics, Big data	November

	and its characteristics, Internet of Things (IoT), Sensors, Smart cities, Cloud Computing and Cloud Services (SaaS, IaaS, PaaS); Grid Computing, Block chain technology	
Unit 1: Introduction to Computer System	Introduction to computer and computing: evolution of computing devices, components of a computer system and their interconnections, Input/output devices. Computer Memory: Units of memory, types of memory – primary and secondary, data deletion, its recovery and related security concerns. Software: purpose and types – system and application software, generic and specific purpose software	December
	REVISION	January

4. Scheme of assessment & weightage:

Sr. No.	Assessment Cycle	Month of Assessment	Mode of Assessment	Weightage
1	PT1	May	Pen paper Test	35
2	PT2	July/August	Pen paper Test	35
3	Half YEARLY	September	Pen paper Test	70
4	PT3	October/November	Pen paper Test	35
5	PT4 (PAT)	December	Pen paper Test	70
6	Pre Board			
7.	Final	February/March	Pen paper Test	70

CURRICULUM CONTENT FOR VARIOUS ASSESSMENTS:

ASSESSMENT	SYLLABUS
PERIODIC TEST -I	Unit 2: Introduction to Python (till control statements)
PERIODIC TEST - II	Unit 2: Introduction to Python
HALF YEARLY EXAM NOTE: Topics already assessed in Periodic 1 & Periodic 2 will be tested again in HALF YEARLY Exam.	Unit 3: Database concepts and the Structured Query Language Database
PERIODIC TEST -III	Unit 3: Database concepts and the Structured Query Language Database Unit 4: Introduction to the Emerging Trends

PERIODIC TEST - IV	Unit 1: Introduction to Computer System Unit 2: Introduction to Python
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IMPORTANT NOTE : *Full syllabus to be assessed in FINAL EXAM.

Note: Paper pen tests will consist of VSA, SA, LA, Case Based, LOTs, HOTs questions of 1,2 3 , 4& 5 marks weightage

6. Prescribed Books:

Preeti Arora

7. Suggested Books (If Applicable)

NCERT

Sumita Arora