

**GURU HARKRISHAN PUBLIC SCHOOL**  
**SYLLABUS**  
**INFORMATICS PRACTICES(065), CLASS XI**  
**SESSION 2022-23**

**Unit wise Distribution of Theory & Practical Marks with Periods**

Unit No.	Unit Name	Marks	Periods Theory	Periods Practical	Total Periods
1	Introduction of Computer System	10	10	-	10
2	Introduction of Python	25	35	28	63
3	Database concepts and Structured Query Language	30	23	17	40
4	Introduction of Emerging Trends	5	7	-	7
	<b>Practical</b>	<b>30</b>	-	-	-
	<b>Total</b>	<b>100</b>	<b>75</b>	<b>45</b>	<b>120</b>

**Month-wise Syllabus Bifurcation**

Month	Chapter	Topics
<b>July</b>	Chapter-1: 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.
	Chapter-2: Getting Started with Python	Basics of Python programming, Python features, Limitation of Python, Python interpreter - interactive and script mode, Exiting Python
<b>August</b>	Chapter-3: Python Programming Fundamentals	The structure of a program, indentation, identifiers, keywords, input and output statements constants, variables, types of operators, precedence of operators, data types, mutable(List, Dictionary & Sets) and immutable(int, float, string, Boolean & tuple) data types, statements, expressions, evaluation and comments, data type conversion, debugging

	Chapter-4: Conditional and Looping Construct	Control Statement: if-else
<b>September</b>	Chapter-4: Conditional and Looping Construct Continue.	Control statement: for loop
	<b>Revision of Half Yearly Examination Syllabus</b> <b>Half Yearly Practical Examination</b> <b>Half Yearly Theory Examination</b>	
<b>October</b>	Chapter-5: Lists in Python	List operations - creating, initializing, traversing and manipulating lists, list methods and built-in functions.
<b>November</b>	Chapter-6: Dictionary	concept of key-value pair, creating, initializing, traversing, updating and deleting elements, dictionary methods and built-in functions
	Chapter-9: 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
<b>December</b>	Chapter-10: Structured Query Language (SQL)	Introduction of SQL, 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 Data Definition: CREATE TABLE Data Query: SELECT, FROM, WHERE. Data Manipulation: INSERT
<b>January</b>	Chapter-11: Emerging Trends	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.
	<b>Revision of Annual Examination Syllabus</b>	
<b>February</b>	<b>Revision of Annual Examination Syllabus</b> <b>Annual Practical Examination</b>	

### Syllabus Bifurcation for Unit Test, Half Yearly Exam & Annual Exam.

S. No.	Test	Chapters
1.	Unit Test-1 (30 Marks)	Chapter-1: Computer System Chapter-2: Getting Started with Python
2.	Half Yearly (Theory = 70 Marks)	Syllabus of Unit Test-1 Chapter-3: Python Programming Fundamentals Chapter-4: Conditional and Looping Constructs
3.	Unit Test-2 (35 Marks)	Chapter-5: Lists in Python Chapter-6 Dictionary
4.	Unit Test-3 (35 Marks)	Chapter-9: Database concepts Chapter-10: Structured Query Language(SQL)
5.	Annual Examination (Theory = 70 Marks)	<b>Entire Syllabus</b>

### Practical Marks Distribution

S. No.	Unit Name	Marks
1.	Problem solving using Python programming language	11
2.	Creating database using MySQL and performing Queries	7
3.	Practical File (minimum of 14 Python Programs, and 14 SQL queries)	7
4.	Viva Voice	5
	<b>Total</b>	<b>30</b>

**Note:** i) Introduce the topic **String** to the students.

ii) Chapter Numbers are referenced according to book "**Informatics Practices with Python by Preeti Arora**".

iii) Chapter No.7 & Chapter No.8 of this book are deleted chapters for the session 2022-23.

iv) NCERT book also recommended as a reference book.

v) For more details of syllabus please visit following CBSE Link:

[Informatics\\_Practices\\_SrSec\\_2022-23.pdf \(cbseacademic.nic.in\)](https://cbseacademic.nic.in/Informatics_Practices_SrSec_2022-23.pdf)