SPLIT-UP SYLLABUS

SUB: COMPUTER SCIENCE (083)

CLASS - XII (Session 2026 - 27)

DISTRIBUTION OF MARKS

UNIT	UNIT NAME	MARKS
1	Computational Thinking and Programming – 2	40
2	Computer Networks	10
3	Database Management	20
Total		70

MONTH- WISE DISTRIBUTION

Month	Chapter No and Name	Topics to be covered
	Unit III: Database Management	
APRIL-MAY	**Chapter-11 Relational Databases**	•Database Concepts: Introduction to database concepts and its need. •Relational data model: Concept of domain, relation, tuple, attribute, degree, cardinality, key, primary key, candidate key, alternate key and foreign key;
	Chapter-12 Simple Queries in SQL	Structured Query Language: •General Concepts: Advantages of using SQL, Data Definition Language and Data Manipulation Language; •Data Types: number / decimal, character / varchar / varchar2, date; SQL commands: SELECT, •DISTINCT, FROM, WHERE, IN, BETWEEN, LIKE, NULL / IS NULL, ORDER BY,GROUP BY, HAVING; • SQL functions: SUM ( ), AVG ( ), COUNT ( ), MAX ( ) and MIN ( );
	Chapter-13 Table Creation and Data Manipulation Commands	• Databases in MySQL-creating, opening and removing Databases. • Creating Tables-Data Integrity through Constraints • Changing Data with DML Commands-Inserting, modifying data with UPDATE command and Deleting Data with DELETE command. • More DDL Commands- ALTER and DROP
	Chapter-14 Grouping Records, Joins in SQL	• Joins: equi-join and natural join ,Additional search conditions in Joins Grouping Result-Nested Groups, placing conditions on groups-having clause Non group Expressions with GROUP BY

	Chapter-15 Interface Python with MySQL	Interface of Python with an SQL database o Connecting SQL with Python o Creating Database connectivity Applications o Performing Insert, Update, Delete queries o Display data by using fetchone(),fetchall(),rowcount Parameterized queries
	Unit I: Computational Thinking and Programming – 2	
July	**Chapter -3 Working with Functions**	• Functions: scope, parameter passing, mutable/immutable properties of data objects, passing strings, lists, tuples, dictionaries to functions, default parameters, positional parameters, return values, functions using libraries: mathematical and string functions.
August	**Chapter-1 & 2 Python Revision Tour 1 and II**	• Revision of the basics of Python covered in Class XI. • STRING, LIST,Tuple and Dictionary Concepts with random and statistics module
	Chapter-4 Using Python Libraries Chapter-6 Exception Handling	• Using Python libraries: create and import Python libraries • Exception Handling in Python- Handling Multiple Errors • Finally Block and Raising an Exception
	Chapter-5 File Handling	• File handling: Need for a data file, Types of file: Text files, Binary files and CSV (Comma separated values) files. • Text File: Basic operations on a text file: Open (filename – absolute or relative path, mode) / Close a text file, Reading and Manipulation of data from a text file, Appending data into a text file, standard input / output and error streams, relative and absolute paths.
September	**Chapter-5 File Handling**	•Binary File: Basic operations on a binary file: Open (filename – absolute or relative path, mode) / Close a binary file, Pickle Module – methods load and dump; Read, Write/Create, Search, Append and Update operations in a binary file. •CSV File: Import csv module, functions – Open / Close a csv file, Read from a csv file and Write into a csv file using csv.reader ( ) and csv.writerow( ).
	Unit II: Computer Networks	
	Chapter-10	

OCTOBER	**Communication and Network Concepts**	**Unit II: Computer Networks** • Evolution of Networking: ARPANET, Internet, Interspace Different ways of sending data across the network with reference to switching techniques (Circuit and Packet switching). •Data Communication terminologies: Concept of Channel, Bandwidth (Hz, KHz, MHz) and Data transfer rate (bps, Kbps, Mbps, Gbps, Tbps). • Transmission media: Twisted pair cable, coaxial cable, optical fiber, infrared, radio link, microwave link and satellite link. •Network devices: Modem, RJ45 connector, Ethernet Card, Router, Switch, Gateway, WiFi card. •Network Topologies and types: Bus, Star, Tree, PAN, LAN, WAN, MAN. •Network Protocol: TCP/IP, File Transfer Protocol (FTP), PPP, HTTP, SMTP, POP3, Remote Login (Telnet) and Internet, Wireless / Mobile Communication 5protocol such as GSM, GPRS and WLL. •Mobile Telecommunication Technologies: 1G, 2G, 3G, 4G and 5G; Mobile processors; Electronic mail protocols such as SMTP, POP3, Protocols for Chat and Video Conferencing: VoIP, Wireless technologies such as Wi-Fi and WiMax ● Network Security Concepts: Threats and prevention from Viruses, Worms, Trojan horse, Spams Use of Cookies, Protection using Firewall, https; ● India IT Act, Cyber Law, Cyber Crimes, IPR issues, hacking. ● Introduction To Web services: WWW, Hyper Text Markup Language (HTML), Extensible Markup Language (XML); Hyper Text Transfer Protocol (HTTP); Domain Names; URL; Website, Web browser, Web Servers; Web Hosting
NOVEMBER-	**Chapter-9 Data Strictures II-Stack and using Lists**	• Data-structures: Lists as covered in Class XI, • Stacks – implementing Stack in Python, Stack Applications. Push, Pop using a list **Revision** **Project work** **Pre-Term1 Examination** **CBSE Board Practical Examination**
DECEMBER		**Revision** **Project work** **Pre-Term1 Examination** **Pre Board Practical Examination**
JANUARY-FEBRUARY		**Revision** **Project work** **Pre- Term 2 Examination**

		CBSE Board Practical Examination

Test Syllabus

Test Name	Chapters and Topics
Revision Test	**Chapter-10(Relational Databases)** **Chapter-11(Simple Queries in SQL)** **Chapter-12(Table Creation and Data Manipulation Commands)** **Chapter-13 (Grouping Records, Joins in SQL)**
Unit Test	**Chapter-10(Relational Databases)** **Chapter-11(Simple Queries in SQL)** **Chapter-12(Table Creation and Data Manipulation Commands)** **Chapter-13 (Grouping Records, Joins in SQL)** **Chapter-14 (Interface Python with MySQL)** **Chapter-1 & 2(Python Revision Tour 1 and II)** **Chapter -3(Working with Functions)** **Chapter-4(Using Python Libraries)**
Half Yearly Exam	**Chapter-10(Relational Databases)** **Chapter-11(Simple Queries in SQL)** **Chapter-12(Table Creation and Data Manipulation Commands)** **Chapter-13 (Grouping Records, Joins in SQL)** **Chapter-14 (Interface Python with MySQL)** **Chapter-1 & 2(Python Revision Tour 1 and II)** **Chapter -3(Working with Functions)** **Chapter-4(Using Python Libraries)** **Chapter-5 File Handling** **Chapter-6 Exception Handling**
Pre Board-1	**Chapter-1 & 2(Python Revision Tour 1 and II)** **Chapter -3(Working with Functions)** **Chapter-4(Using Python Libraries)** **Chapter-5 File Handling** **Chapter-11(Relational Databases)** **Chapter-12(Simple Queries in SQL)** **Chapter-13(Table Creation and Data Manipulation Commands)** **Chapter-14 (Grouping Records, Joins in SQL)** **Chapter-15 (Interface Python with MySQL)** **Chapter-6 Exception Handling** **Chapter-7(Data Strictures II-Stack using Lists)** **Chapter-8 and 9 (Communication and Network Concepts)**
Pre Board-2	**Chapter-1 & 2(Python Revision Tour 1 and II)** **Chapter -3(Working with Functions)** **Chapter-4(Using Python Libraries)** **Chapter-5 File Handling** **Chapter-11(Relational Databases)** **Chapter-12(Simple Queries in SQL)** **Chapter-13(Table Creation and Data Manipulation Commands)** **Chapter-14 (Grouping Records, Joins in SQL)**

	Chapter-15 (Interface Python with MySQL) **Chapter-6 Exception Handling** **Chapter-7(Data Strictures II-Stack using Lists)** **Chapter-8 and 9 (Communication and Network Concepts)**