BLOOM PUBLIC SCHOOL

C-8 Vasant Kunj, New Delhi

Syllabus for the Session 2025-26

Class: XII

Subject: COMPUTER SCIENCE(083)

MONTH	CHAPTER (NCERT Text book)	CONTENT (Topics)	Practical/Activities
April	Ch-1: Revision of the basics of Python covered in Class XI.	● **Class XI books topics** Ch-5: Getting Started with Python Ch-6: Flow of controls Ch-7: Functions Ch-8: Strings Ch-9: List Ch-10: Tuples and Dictionaries	Programs based on Python
May	Ch-2: File Handling in Python	● **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, Append data into a text file, standard input/output and error streams, relative and absolute paths. ● **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.	Programs based on Python
July	Ch-2: File Handling inPython (continued) Ch-3: Stack Ch-7: Understanding data	● **CSV file:** import csv module, open / close csv file, write into a csv file using csv.writerow() and read from a csv file using csv.reader( ) ● **Exception Handling**: Introduction, handling exceptions using try-except-finally blocks ● **Using Python libraries:** Import Python libraries. ● **Data structure:** Stacks – Push, Pop using a list.	● Programs based on Python ● Stack Programs

SYLLABUS

Month			
		● **Database concepts:** introduction to database concepts and its need.	
August	Ch-8: Database concepts Ch-9: Structured Query Language Python SQLConnectivity (SumitaArora) SQL aggregate functions (Sumita Arora	● **Relational data model:** relation, attribute, tuple, domain, degree, cardinality, keys (candidate key, primary key, alternate key, foreign key) ● **Structured Query Language**: introduction, Data Definition Language and Data Manipulation Language, data type (char(n), varchar(n), int, float, date), constraints (not null, unique, primary key), create database, use database, show databases, drop database, show tables, create table, describe table, alter table (add and remove an attribute, add and remove primary key), drop table, insert, delete, select, operators (mathematical, relational and logical), aliasing, distinct clause, where clause, in, between, order by, meaning of null, is null, is not null, like, update command, delete command ● Interface of python with an SQL database: connecting SQL with Python, performing insert, update, delete queries using cursor, display data by using fetchone(), fetchall(), rowcount, creating database connectivity applications. ● **Aggregate functions** (max, min, avg, sum, count), group by, having clause, joins: Cartesian product on two tables, equi-join and natural join.	● SQL Queries ● Python connectivity Programs
September	Ch-10 Computer Networks Ch-11 Data Communication (continued)	● **Evolution of networking**: introduction to computer networks, evolution of networking (ARPANET, NSFNET, INTERNET) ● **Data communication terminologies:** concept of communication, components of data communication (sender,receiver, message,	

		communication media, protocols), measuring capacity of communication media (bandwidth, data transfer rate), IP address, switching techniques (Circuit switching, Packet switching)	
October		● **Transmission media:** Wired communication media (Twisted pair cable, Coaxial cable, Fiber-optic cable), Wireless media (Radio waves, Microwaves, Infrared waves ● **Network devices** (Modem, Ethernet card, RJ45, Repeater, Hub, Switch, Router, Gateway, WIFI card)· ● **Network topologies and Network types**: Types of networks (PAN, LAN, MAN, WAN),networking topologies (Bus, Star, Tree) ● **Network protocol**: HTTP, FTP, PPP, SMTP, TCP/IP, POP3, HTTPS, TELNET, VoIP ● **Introduction to web services**: WWW, Hyper Text Markup Language (HTML), Extensible Markup Language (XML), domain names, URL, website, web browser, web servers, web hosting.	
November	PRE BOARD EXAMINATION 1	Whole syllabus	
December	PRE BOARD EXAMINATION 2	Whole syllabus	
January	Revision/ BOARD PRACTICALS	Whole syllabus	
February	BOARD EXAMINATION	Whole syllabus	
March	BOARD EXAMINATION	Whole syllabus	

ASSESSMENT SYLLABUS	
PERIODIC ASSESSMENT -1	**Class XI chapters:** Ch-5: Getting Started with Python Ch-6: Flow of controls Ch-7: Functions Ch-8: Strings Ch-9: List Ch-10: Tuples and Dictionaries **Class XII chapter:-** Ch-2:- File handling(covered till date)
PERIODIC ASSESSMENT -2	**Class XII chapter:-** Ch-2: File handling Ch-3: Stack Ch-7: Understanding data Ch-8: Database concepts
MID TERM EXAM	**Class XI Syllabus** Ch-5: Getting Started with Python Ch-6: Flow of controls Ch-7: Functions Ch-8: Strings Ch-9: List Ch-10: Tuples and Dictionaries **Class XII chapter:-** Ch-2: File handling Ch-3: Stack Ch-7: Understanding data Ch-8: Database concepts Ch-9:Structured Query Language, Python SQL Connectivity , SQL aggregate functions
PRE BOARD EXAMINATION-1	**Class XI Syllabus** Ch-5: Getting Started with Python Ch-6: Flow of controls Ch-7: Functions Ch-8: Strings Ch-9: List Ch-10: Tuples and Dictionaries **Class XII chapter:-** Ch-2:- File handling Ch-3:- Stack Ch-7:- Understanding data Ch-8:- Database concepts Ch-9: Structured Query Language, Python SQL Connectivity, SQL aggregate functions Ch-10: Computer Network Ch-11: Data Communication Ch-12: Security Aspects

PRE BOARD EXAMINATION-2	Full syllabus
CBSE BOARD EXAMINATION	Full syllabus