

AIR FORCE SCHOOL HASIMARA

WEEKLY SPLITUP SYLLABUS (2025-26)

CLASS: XII-SC

SUBJECT: COMPUTER SCIENCE (083)

BOOKS: NCERT COMPUTER SCIENCE FOR CLASS XII
COMPUTER SCIENCE WITH PYTHON SUMITA ARORA FOR CLASS XII

Month	Week Days	Working Days	Chapters/ Topics	Activities/ Assignments
April 25	3-5	3	Revision of Python topics covered in Class XI	Homework and Classwork Practical Works Class Tests
	7-11	4	Revision of Python topics covered in Class XI	
	14-19	5	Functions: types of function (built-in functions, functions defined in module, user defined functions), creating user defined function, arguments and parameters, default parameters, positional parameters	
	21-26	6	Functions: function returning value(s), flow of execution, scope of a variable (global scope, local scope)	
	28-30	3	Exception Handling: Introduction, handling exceptions using try-except-finally blocks	
May 25	1-3	3	File Handling: Files: Introduction to files, types of files (Text file, Binary file, CSV file), relative and absolute paths Text file: opening a text file, text file open modes (r, r+, w, w+, a, a+), closing a text file, opening a file using with clause	Homework and Classwork Practical Works Class Tests
	5-8	4	File Handling: Text File: writing/appending data to a text file using write() and writelines	
Jun 25	18-21	4	File Handling: Text File: reading from a text file using read(), readline() and readlines()	Homework and Classwork Practical Works Class Tests
	23-28	5	File Handling: Text File: seek and tell methods, manipulation of data in a text file	

Jun 25	30	1	File Handling: Binary file: basic operations on a binary file: open using file open modes (rb, rb+, wb, wb+, ab, ab+), close a binary file	Homework and Classwork Practical Works Class Tests
July 25	1-5	5	File Handling: Binary file: import pickle module, dump() and load() method, read, write	Homework and Classwork Practical Works Class Tests
	7-11	5	File Handling: Binary File: search, append and update operations in a binary file	
	14-19	6	File Handling: CSV file: import csv module, open / close csv file, write into a csv file using writer(),writerow(),writerows() and read from a csv file using reader()	
	21-26	6	File Handling: CSV file: read, write/create, search, append and update operations in a CSV file	
	28-31	4	Stack: Introduction, operations on stack (push & pop), implementation of stack using list.	
Aug 25	1-2	2	Database Concepts: introduction to database concepts and its need	Homework and Classwork Practical Works Class Tests
	4-8	5	Database Concepts: 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)	
	11-16	4	Structured Query Language: 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	
	18-23	6	Structured Query Language: 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	

Aug 25	25-30	6	Structured Query Language: like, update command, delete command, aggregate functions (max, min, avg, sum, count), group by, having clause, joins: cartesian product on two tables, equi-join and natural join	Homework and Classwork Practical Works Class Tests
Sep 25	1-6	5	Structured Query Language: joins: cartesian product on two tables, equi-join and natural join Interface of python with SQL database: connecting SQL with Python	Homework and Classwork Practical Works Class Tests
	8-9	2	Interface of python with SQL database: performing insert, update, delete queries using cursor	
		10-26	HALF YEARLY EXAMINATION	

Oct 25	7-10	4	Interface of python with SQL database: display data by using connect(), cursor(), execute(), commit(), fetchone(), fetchall(), rowcount	Homework and Classwork Practical Works Class Tests
	13-18	6	Interface of python with SQL database: creating database connectivity applications, use of %s format specifier or format() to perform queries	
	20-25	6	Networking: 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)	Homework and Classwork Practical Works Class Tests
Oct 25				

Oct 25	27-31	5	Networking: Transmission media: Wired communication media (Twisted pair cable, Co-axial cable, Fiber-optic cable), Wireless media (Radio waves, Micro waves, Infrared waves) Network devices (Modem, Ethernet card, RJ45, Repeater, Hub, Switch, Router, Gateway, WIFI card)	Homework and Classwork Practical Works Class Tests
Nov 25	1	1	Networking: Network types: types of networks (PAN, LAN, MAN, WAN)	Homework and Classwork Practical Works Class Tests
	3-7	4	Networking: Networking topologies (Bus, Star, Tree) Network protocol: HTTP, FTP, PPP, SMTP, TCP/IP, POP3, HTTPS, TELNET, VoIP	
	10-15	6	Networking: Introduction to web services: WWW, Hyper Text Markup Language (HTML), Extensible Markup Language (XML), domain names, URL, website, web browser, web servers, web hosting	
	17-22	6	Revision	
	24-25	2	Revision	
	26-30	PRE-BOARD EXAM		
Dec 25	PRE-BOARD EXAM COMMOM PRE-BOARD EXAM			
Jan 26	CBSE PRACTICAL EXAM			
Feb 26	CBSE THEORY EXAM			
Mar 26				

Mrinmoy Paul (PGT CS)
Subject Teacher & HOD