

KOTHARI INTERNATIONAL SCHOOL

GRADE - 12 ANNUAL ACADEMIC PLAN

SUBJECT: COMPUTER SCIENCE SESSION: 2022-23

NAME OF THE TEACHER VARSHA KUMAR

MONTH	TOPIC	CONTENT(SUB-TOPICS)
MARCH (9 DAYS)	1. FUNCTIONS	Types of function (built-in functions, functions defined in module, user defined functions), creating user defined function,
APRIL (18 DAYS)	1.FUNCTIONS 2. PYTHON LIBRARIES	Arguments and parameters, default parameters, positional parameters, function returning value(s), flow of execution, scope of a variable (global scope, local scope)
MAY (13 DAYS)	1.INTRODUCTION TO RDBMS 2. SQL QUERIES -1	Database concepts: introduction to database concepts and its need Relational data model: relation, attribute, tuple, domain, degree, cardinality, keys (candidate key, primary key, alternate key, foreign key) 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,
APRIL -MAY UNIT TEST – 1 (COMMENCING 29 APRIL & ENDING 20 MAY 2022)		

<p>JUNE</p> <p>SUMMER VACATION</p>	-	-
<p>JULY (20 DAYS)</p>	<p>1. SQL QUERIES –II</p> <p>2. DATA STRUTURE</p>	<p>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, aggregate functions (max, min, avg, sum, count), group by, having clause, joins: cartesian product on two tables, equi-join and natural join</p> <p>Stack, operations on stack (push & pop), implementation of stack using list.</p>
<p>AUGUST (19 DAYS)</p> <p>UNIT TEST 2</p>	<p>1. FILE HANDLING(TEXT&BINARY)</p> <p>2. FILE HANDLING (CSV)</p>	<p>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, writing/appendng data to a text file using write() and writelines(), reading from a text file using read(), readline() and readlines(), seek and tell methods, manipulation of data in a text file Binary file: basic operations on a binary file: open using file open modes (rb, rb+, wb, wb+, ab, ab+), close a binary file, import pickle module, dump() and load() method, read, write/create, search, append and update operations in a binary file</p> <p>import csv module, open / close csv file, write into a csv file using csv.writer() and read from a csv file using csv.reader()</p>

<p>SEPTEMBER (22 DAYS)</p> <p>HALF YEARLY EXAMINATION COMMENCES 16 SEPTEMBER & ENDS 28 SEPTEMBER 2022</p>	<p>REVISION HALF YEARLY EXAMINATION</p>	<p>SYLLABUS FOR HALF YEARLY EXAMINATION IS 75%</p>
<p>OCTOBER (13 DAYS)</p>	<p>1. INTERFACE OF PYTHON WITH SQL</p> <p>PROJECT WORK</p>	<p>connecting SQL with Python, performing insert, update, delete queries using cursor, display data by using fetchone(), fetchall(), rowcount, creating database connectivity applications</p>
<p>NOVEMBER (21 DAYS)</p> <p>COMPLETION OF PROJECT</p> <p>PRE-BOARD EXAMINATION- 1 COMMENCES ON 18 NOVEMBER AND ENDS ON 30 NOVEMBER</p>	<p>1 .COMPUTER NETWORKS</p>	<ul style="list-style-type: none"> • 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) • Transmission media: Wired communication media (Twisted pair cable, Co-axial cable, Fiber-optic cable), Wireless media (Radio

		<p>waves, Micro waves, Infrared waves)</p> <ul style="list-style-type: none"> • 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 <p>SYLLABUS FOR PRE-BOARD EXAMINATION- 1 IS 85%</p>
<p>DECEMBER (21 DAYS)</p> <p>PRE-BOARD EXAMINATION- 2 COMMENCES ON 16 DECEMBER AND ENDS ON 30 DECEMBER</p>	<p>Revision and Practice for Pre-Board 1</p>	<p>SYLLABUS FOR PRE-BOARD EXAMINATION- 2 IS 100%</p>
<p>JANUARY (15 DAYS)</p>	<p>PRACTICE TESTS BOARD PRACTICALS COMMENCE</p>	

FEBRUARY (20 DAYS)	BOARD PRACTICALS	
AWAIT CBSE ANNOUNCEMENT OF BOARD EXAMINATION DATES		

*****PRACTICAL / PROJECT WORK WILL RUN SIMULTANEOUSLY WITH ACADEMIC TRANSACTION.**