DELHI POLICE PUBLIC SCHOOL

Annual Syllabus: 2025-26

## Subject: INFORMATICS PRACTICE
## Class: XII

| MONTH | UNIT/CHAPTER/TOPIC |
|---|---|
| **MARCH** | **Unit 1: Data Handling using Pandas and Data Visualization**<br>**Data Handling using Pandas -I**<br>Introduction to Python libraries- Pandas, Matplotlib.<br>Data structures in Pandas - Series and Data Frames. |
| **APRIL** | **Unit 1: Data Handling using Pandas and Data Visualization**<br><br>Series: Creation of Series from – ndarray, dictionary, scalar value; mathematical operations;<br><br>**Unit 1: Data Handling using Pandas and Data Visualization (Contd..)**<br>Head and Tail functions;<br>Selection, Indexing and Slicing.<br>Data Frames: creation - from dictionary of Series, list of dictionaries, Text/CSV files; display; iteration; |
| **MAY** | Operations on rows and columns: add, select, delete, rename; Head and Tail functions; Indexing using Labels,Boolean Indexing;<br><br>**Unit 1: Data Handling using Pandas and Data Visualization (Contd..)**<br>Importing/Exporting Data between CSV files and Data Frames.<br>**Data Visualization**<br>Purpose of plotting; drawing and saving following types of plots using Matplotlib – line plot, |
| **JULY** | bar graph, histogram Customizing plots: adding label, title, and legend in plots.<br>**Unit 2: Database Query using SQL**<br>Revision of database concepts and SQL commands covered in class XI<br><br>Math functions: POWER (), ROUND (), MOD ().<br>Text functions: UCASE ()/UPPER (), LCASE ()/LOWER (), MID ()/SUBSTRING ()/SUBSTR (), LENGTH (), LEFT (), RIGHT (), INSTR (), LTRIM (), RTRIM (), TRIM (). |
| **AUGUST** | Date Functions: NOW (), DATE (), MONTH (), MONTHNAME (), YEAR (), |

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| | DAY (), DAYNAME ().Aggregate Functions: MAX (), MIN (), AVG (), SUM (), COUNT (); using COUNT (*).<br><br>Querying and manipulating data using Group by, Having, Order by.<br>Working with two tables using equi-join<br><br>**Unit 3: Introduction to Computer Networks**<br> Introduction to networks, Types of network: PAN, LAN, MAN, WAN.<br>Network Devices: modem, hub, switch, repeater, router, gateway |
| **SEPTEMBER** | REVISION, HALF YEARLY EXAM comences, Evaluation |
| **OCTOBER** | Introduction to Internet, URL, WWW, and its applications- Web, email, Chat, VoIP.<br> Website: Introduction, difference between a website and webpage, static vs dynamic web page,web server and hosting of a website.<br>Web Browsers: Introduction, commonly used browsers, browser settings, add-ons and plug-ins, cookies.<br><br>**Unit 4: Societal Impacts**<br>Digital footprint, net and communication etiquettes, data protection, intellectual property rights (IPR), |
| **NOVEMBER** | plagiarism, licensing and copyright, free and open source software (FOSS), cybercrime and cyber laws, hacking, phishing, cyber bullying, overview of Indian IT Act.<br>REVISION, PRE BOARD EXAM -1 |
| **DECEMBER** | REVISION, PRE BOARD EXAM -2 |
| **JANUARY** | BOARD PRACTICAL EXAM COMMENCES |
| **FEBRUARY** | BOARD PRACTICAL EXAMS CONTINUES, BOARD THEORY EXAM COMMENCES COMMENCES |