

CLASS XII			SUBJECT: IP (065)
SN	Month	No. of working days	Name of the chapter/topic to be covered
1	APRIL - MAY	23	Unit 1: Data Handling using Pandas -I Introduction to Python libraries- Pandas, Matplotlib; Data structures in Pandas - Series and Data Frames. Series: Creation of Series from – ndarray, dictionary, scalar value;
2	JUNE	8	mathematical operations; Head() and Tail() functions; Selection, Indexing and Slicing.
3	JULY	25	Data Frames: creation- from dictionary of Series, list of dictionaries, Text/CSV files, display; iteration; Operations on rows and columns: add, select, delete, rename; Head and Tail functions; Indexing using Labels, Boolean Indexing; Importing/Exporting. Data between CSV files and Data Frames Data Visualization Purpose of plotting; drawing and saving following types of plots using Matplotlib – line plot, bar graph, histogram Customizing plots: adding label, title, and legend in plots.
4	AUGUST	23	Unit 2: Database Query using SQL Revision of database concepts and SQL commands covered in class XI Math functions: POWER (), ROUND (), MOD (). Text functions: UCASE ()/UPPER (), LCASE ()/LOWER (), MID ()/SUBSTRING ()/SUBSTR (), LENGTH (), LEFT (), RIGHT (), INSTR (), LTRIM (), RTRIM (), TRIM (). Date Functions: NOW (), DATE (), MONTH (), MONTHNAME (), YEAR (), DAY (), DAYNAME (). Aggregate Functions: MAX (), MIN (), AVG (), SUM (), COUNT (); using COUNT (*). Querying and manipulating data using Group by, Having, Order by. Working with two tables using equi-join
5	SEPTEMBER	24	Unit 3: Introduction to Computer Networks Introduction to networks, Types of network: PAN, LAN, MAN, WAN. Network Devices: modem, hub, switch, repeater, router, gateway Network Topologies: Star, Bus, Tree, Mesh.

6	OCTOBER	20	Introduction to Internet, URL, WWW, and its applications- Web, email, Chat, VoIP. Website: Introduction, difference between a website and webpage, static vs dynamic web page, web server and hosting of a website. Web Browsers: Introduction, commonly used browsers, browser settings, add-ons and plug-ins, cookies
7	NOVEMBER	23	Unit 4: Societal Impacts Digital footprint, net and communication etiquettes, data protection, intellectual property rights (IPR), plagiarism, licensing and copyright, free and open source software (FOSS), cybercrime and cyber laws, hacking, phishing, cyber bullying, overview of Indian IT Act. E-waste: hazards and management. Awareness about health concerns related to the usage of technology.
8	DECEMBER	18	Comprehensive Revision and project completion
9	JANUARY	24	Comprehensive Revision
10	February	23	Comprehensive Revision, AISSCE Practical EXAMINATION, CBSE EXAMINATION
11	March	23	CBSE EXAMINATION