

INFORMATICS PRACTICES (065)
SYLLABUS OF CLASS XII
SESSION: 2026-27

Theory : 70 Practical : 30

Date/Month	Unit	Chapter/Topics
6 th April to 19 th April	Unit I: Data Handling using Pandas and Data Visualization	Review of Python programming of class XI
21 th April to 30 th April	Unit I: Data Handling using Pandas and Data Visualization	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; mathematical operations; series attributes, head and tail functions; selection, indexing and slicing.
01 st May to 25 th May	Unit I: Data Handling using Pandas and Data Visualization	Data Handling using Pandas –I Data Frames: creation of data frames from dictionary of series, list of dictionaries, text/CSV files, display, iteration. Operations on rows and columns: add (insert /append) , select, delete (drop column and row), rename, Head and Tail functions, indexing using labels, Boolean indexing; joining, merging and concatenation of data frames.
1 st July to 06 th July	Unit I: Data Handling using Pandas and Data Visualization	Importing/Exporting Data between CSV files and Data Frames.
9 th July to 9 th August	Unit I: Data Handling using Pandas and Data Visualization	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.
12 th August to 23 th August	Unit II: Database Query using SQL	Review of SQL of class XI
26 th August to 30 th August	Unit II: Database Query using SQL	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 ().
2 nd September to 6 th September	Unit II: Database Query using SQL	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.
9 th September to 13 th September	Unit II: Database Query using SQL	Exercise based on SQL functions, group by, having and order by clause.
16 th September to 27 th September	Unit III: 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.

1 st October to 4 th October	Unit III: Introduction to Computer Networks	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.
5 th October to 8 th October	Unit IV: 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.
8 th October to 10 th October	Unit IV: Societal Impacts	E-waste: hazards and management. Awareness about health concerns related to the usage of technology.
11th October to 15th October	REVISION	