



## **DELHI PUBLIC SCHOOL (JOKA) SOUTH KOLKATA**

**COMPUTER SYLLABUS [2023-2024]**

**CLASS – XII**  
**INFORMATICS PRACTICES (065)**

<b>PERIODIC TEST-I</b>	<p><b>Unit 1: Data Handling using Pandas -I</b></p> <p><b>Introduction</b> to Python libraries- Pandas, Matplotlib. Data structures in Pandas - Series and Data Frames.</p> <p><b>Series:</b> Creation of Series from – ndarray, dictionary, scalar value; mathematical operations; Head and Tail functions; Selection, Indexing and Slicing.</p> <p><b>Data Frames:</b> 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;</p> <p>Importing/Exporting Data between CSV files and Data frames.</p>
<b>PERIODIC TEST-II</b>	<p><b>Unit-1: Data Visualization</b></p> <p>Purpose of plotting; drawing and saving following types of plots using Matplotlib – line plot, bar graph, histogram</p> <p>Customizing plots: adding label, title, and legend in plots.</p> <p><b>Unit 4: Societal Impacts</b></p> <p>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.</p>



## CLASS XII

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<b>MIDTERM EXAMINATION</b>	<p><b>Unit1 and Unit:4 Revision</b></p> <p><b>Unit 2: Database Query using SQL String /Date / Math functions:</b></p> <p>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.</p>
<b>PRACTICE EXAMINATION</b>	<p><b>Theory:</b></p> <ul style="list-style-type: none"><li>• <b>Syllabus of MIDTERM</b></li></ul> <p><b>Unit 3: Introduction to Computer Networks</b></p> <p>Introduction to networks, Types of networks: LAN, MAN, WAN. Network Devices: modem, hub, switch, repeater, router, gateway Network Topologies: Star, Bus, Tree, Mesh. 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.</p> <p><b>Practical Examination as per board syllabus</b></p>