

SPLIT-UP SYLLABUS

SUB: INFORMATICS PRACTICES (065)

CLASS - XII (NEW SYLLABUS)

MONTH	Name of the chapter	Description	Periods
April	INTRODUCTION TO COMPUTER NETWORKS	<ul style="list-style-type: none"> • Network and types • Network devices: hub modem ,switch, repeater, router, gateway • Network topology: star ,bus mesh, tree introduction to internet, URL, WWW, web, chat email, Voip. • Website web server, hacking , phishing web browser browser settings cookies. 	18
May-june-july	Unit 1: Data Handling using pandas and Data visualization	<p>Unit 1: Data Handling using pandas and Data visualization</p> <p>Introduction to pandas libraries- pandas ,Matplotlib</p> <p>Data structure in Pandas – series And data frames.</p> <p>Series: creation of series from ndarray, dictionary, scalar value, mathematical operations, attributes, head and tail function, selection, indexing and slicing.</p> <p>Data frames : creation of data frames from dictionary of series, list of dictionary, display, iteration. Operation on rows and columns: add(insert /append), select rows), rename, head and tail function, indexing using labels, Boolean indexing, concatenation of data frames.</p> <p>Importing exporting data between CSV files and data frames</p> <p>Data handling using Pandas -II</p> <p>Descriptive statistics: max ,min,count,sum,mean,median, mode, quartile, standard deviation</p> <p>operations on Data Frames: pivoting, group by, sorting, deleting and renaming aggregation</p>	40 theory + 20 practical

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		Create a histogram, and quantiles	
		Function application: pipe, apply, aggregation (group by), tra • Reindexing, and altering labels.	
August September	Unit 4: Societal impacts	<ul style="list-style-type: none">• Intellectual property rights, plagiarism, digital rights management, and licensing (Creative Commons, GPL and Apache), open source, open data, privacy.• Privacy laws, fraud; cyber-crime- phishing, illegal downloads, child pornography, scams; cyber forensics, IT Act, 2000.• Technology and society: understanding of societal issues and cultural changes induced by technology.• E-waste management: proper disposal of used electronic gadgets.• Identity theft, unique ids, and biometrics.• Gender and disability issues while teaching and using computers. Examination	20

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October		Unit: 2 Data base using SQL <ul style="list-style-type: none">• Relational databases: Concept of a database, relations, attributes and tuples, keys - candidate key, primary key, alternate key, foreign key; Degree and Cardinality of a table.• Use SQL - DDL/DML commands to CREATE TABLE, INSERT INTO, UPDATE TABLE, DELETE FROM, ALTER TABLE, MODIFY TABLE, DROP TABLE, keys, and foreign keys; to view content of a table: SELECT-FROM-WHERE-ORDER BY alongwith BETWEEN, IN, LIKE. (Queries only on single table) Aggregate Functions : MIN , MAX, AVG, COUNT, SUM	
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