JAGANNATH INTERNATIONAL SCHOOL

MONTH-WISE SYLLABUS-2024-25
CLASS-XII

English Core (301)

Prescribed Books: Flamingo (English Reader published by NCERT)
Vistas (Supplementary Reader published by NCERT)

Month	Chapters	Activities
April	The Last Lesson, Poets and Pancakes, The Third Level, Notice Writing, Reading Comprehension	Brainstorming Charts
May	Lost Spring, The Interview, The Tiger King, Keeping Quiet, Letter to Editor (Formal Letter Writing), Reading Comprehension	Story Maps
July	Deep Water, Going Places, Journey to the End of the Earth, A thing of Beauty, Job Application (Formal letter Writing), Reading Comprehension	Character Mapping
August	The Rattrap, A Roadside Stand, The Enemy, Report Writing, Reading Comprehension	Writing Skills
September	Aunt Jennifer's Aunt, Article Writing, Reading Comprehension	Group Discussions
October	Indigo, On the Face of it, Formal/Informal Invitations and Reply, Reading Comprehension	Extempore
November	Memories of Childhood: The Cutting of my Long Hair and We too are Human Beings, Revision of Invitations and Reply (Formal & Informal), Reading Comprehension	Assessment of Speaking and Listening Skills (ASL)

ACCOUNTANCY (055)

**Prescribed Books: Part-A Fundamentals of partnership& Share Capital (Book-1)
Part-B Analysis of Financial statement (By T. S. Grewal)**

Months	Chapters
April	**PART-A** CH-1 Accounting for Partnership Firms-Fundamentals CH -2 Goodwill: Nature and Valuation CH-3 Change in Profit-Sharing Ratios Among the Existing Partners
May	CH-4 Admission of a Partner CH-5 Retirement of a Partner
July	CH-6 Death of a Partner CH-7 Dissolution of a Partnership firm CH-8 Accounting for Share Capital
August	CH-8 Accounting for Share Capital (continued) Ch-9 Issue of Debentures **PART-B** CH-1 Financial Statements of a Company
September	CH-2 Financial Statement Analysis CH-5 Tools of Financial Statement Analysis- Comparative Statement and Common size Statement
October	CH-3 Accounting Ratios CH-4 Cash Flow Statement
November	CH-4 Cash Flow Statement (continued)

BUSINESS STUDIES (054)

Prescribed Books: NCERT & Poonam Gandhi

Months	Chapters
April	**PART-A** CH-1 Nature and Significance of Management CH-2 Principles of Management
May	CH-2 Principles of Management (continued) CH-3 Business Environment
July	CH-4 Planning CH-5 Organising
August	CH-6 Staffing CH-7 Directing CH-8 Controlling
September	CH-9 Financial Management

October	CH-10 Financial Markets
	CH-11 Marketing Management
November	CH-12 Consumer Protection

ECONOMICS
BOOK: MACRO ECONOMICS: Sandeep Garg (Dhanpat Rai Publications)

BOOK: Indian Economic Development: Sandeep Garg (Dhanpat Rai Publications)

MONTH	CHAPTERS	ACTIVITY
APRIL	Ch-1: Introduction of National Income Ch-2: Basic concepts of National Income Ch-3: National Income and its aggregates	• Flow chart • Understanding concepts through diagrams • Numerical based on methods of calculating National Income • Using Mnemonic to learn headings in various methods of calculating National Income
MAY	Ch-4: Methods of calculating National Income Ch-5: Money Ch- 6: Banking	• Flow chart • Understanding concepts through diagrams • Numerical based on methods of calculating National Income • Using Mnemonic to learn headings in various methods of calculating National Income • Reading Economics Times newspaper & to note down the rate of CRR, SLR, Bank Rate, Reverse Repo Rate.
JULY	Ch-7: Aggregate Demand, Aggregate Supply and Related concepts Ch-8: Short Run Equilibrium Output	• Diagrammatic presentation • Learning formulas • Class test
AUGUST	Ch-9: Problem of Deficient & Excess Demand	• Diagrammatic presentation • Learning formulas • Class test
SEPTEMBER	Revision + Project Work	
OCTOBER	Ch-10: Government Budget	• To note down the highlights of Government Budget from newspaper • Numerical based on types of deficits
NOVEMBER	Ch-11: Foreign Exchange Rate	• Flowchart

MONTH	CHAPTERS	ACTIVITY
APRIL	Ch-1: Indian Economy on the Eve of Independence Ch-2: Economic System and Common Goals of Five Year Plans	• Flowchart • Oral test
MAY	Ch-3: Indian Economy (1950-1990)	• Flowchart • Oral test • Written test
JULY	Ch-4: Economic Reforms Since 1991-New Economic Policy	• Flow chart • Real examples
AUGUST	Ch-5: Human Capital Formation in India	• Flow chart • Class test
SEPTEMBER	Revision + Project Work	• Project work
OCTOBER	Ch-6: Rural Development Ch-7: Employment	• Flow chart • Examples of various types of employment
NOVEMBER	Ch-8: Environment & Sustainable Development Ch-9: Comparative Development Experiences of India and its Neighbours	• Flow chart • Class test
	Ch-12: BOP	• Diagram of equilibrium exchange rate • Class test
DECEMBER	Revision	
JANUARY	Revision	
FEBRUARY	Revision	

CHEMISTRY

BOOKS :
- NCERT Chemistry
- Pradeep Chemistry, Pradeep Publication
- Comprehensive Chemistry Lab Manual

MONTH	UNITS	PRACTICALS
April	Unit -1 Solution Unit-5 Coordination compounds	➤ Chromatography ➤ Preparation of crystals of Potash alum
May	Unit -2 Electrochemistry Unit-3 Chemical Kinetics	➤ Salt Analysis-Basic radicals ➤ Testing of Functional groups
July	Unit -6 Haloalkanes and Haloarenes	➤ Titration of $KMNO_4$ with oxalic acid solution ➤ Titration of $KMNO_4$ with Mohr's salt solution
August-September	Unit -7 Alcohols, Phenols and Ethers	----------------------
October	Unit -8 Aldehydes, Ketones and Carboxylic acids Unit -9 Amines –Organic Compounds Containing Nitrogen	➤ Salt analysis- Acidic radicals
November	Unit -4 d and f Block elements Unit -10 Biomolecules	➤ Testing of Carbohydrates, fats and, Proteins ➤ Investigatory Projects

PHYSICS

BOOKS :
- NCERT Physics (Part I and Part II)
- Simplified Physics by SL Arora
- Comprehensive Physics Lab Manual

MONTHLY SYLLABUS

MONTH	CHAPTERS	PRACTICALS
April	**Unit I : Electrostatics** 1. Electric Charges and Fields 2. Electrostatic Potential and Capacitance	➤ To determine resistivity of two/three wires by potential and current graph. ➤ To measure resistance, voltage (AC/DC), current (AC) and check continuity of a given circuit using multimeter.

May	**Unit II : Current Electricity** 3. Current Electricity	➢ To measure resistance of a wire using meter bridge. ➢ To verify the laws of combination of resistances using meter bridge. ➢ To assemble the components of a given electrical circuit.

July	**Unit III: Magnetic Effects of Current and Magnetism**
	  4. Moving Charges and Magnetism
	  5. Magnetism and Matter
	
	Unit IV : Electromagnetic Induction and Alternating Currents
	  6. Electromagnetic Induction
		➢ To determine resistance of a galvanometer by half deflection method.
		➢ To study the variation in potential drop with length of a wire for a steady current.

August – September	7. Alternating Current
	
	Unit V : Electromagnetic Waves
	  8. Electromagnetic Waves
	
	Unit VI : Optics
	  9. Ray Optics and Optical Instruments
		➢ To find focal length of a convex lens by plotting graphs.
		➢ To find the value of v for different values of u for a concave mirror.
		➢ To identify a diode, an LED, a resistor and a capacitor from a mixed collection of such item.

October	10. Wave Optics **Unit VII : Dual Nature of Radiation and Matter** 11. Dual Nature of Radiation and Matter	➢ To determine angle of minimum deviation for a given prism. ➢ To observe refraction and lateral deviation of a beam of light incident obliquely on a glass slab.
November	**Unit VIII : Atoms and Nuclei** 12. Atoms 13. Nuclei **Unit IX : Electronic Devices** 14. Semiconductor Electronics: Materials, Devices and Simple Circuits	➢ To draw I-V characteristics of a p-n junction. ➢ To study the nature and size of the image formed by a convex lens, on a screen by using a candle and a screen (for different distances of the candle from the lens).

PHYSICAL EDUCATION

Book: Sarashwati Publication

MONTH	CHAPTER
April – May	Ch.1: Planning in Sports Ch.2: Sports & Nutrition Ch.3: Yoga & Lifestyle
July	Ch. 4: Physical Education & Sports for CWSN Ch. 5: Children & Women in Sports
August – September	Ch.6: Test and measurement in Sports Ch.7: Physiology & Injuries in Sports
October	Ch.8: Biomechanics & Sports Ch.9: Psychology & Sports
November	Ch.10: Training in Sports
December	File work

PSYCHOLOGY

Books :

- NCERT - Psychology
- CBSE study material

Month	Chapters	Activities and Practicals
April-May	Ch-6 Attitude and Social Cognition Ch-7 Social Influence and Group Processes Ch-4 Psychological Disorders(Cont.)	#Administration of Attitude test #Administration of Adjustment Test # Case Profile
July	Ch-4 Psychological Disorders Ch-2 Self and Personality	# Visit to Rehabilitation centre # Guess and identify activity #Administration of SCAT #Administration of Personality Test
August-September	Ch-1 Variations in Psychological Attributes	#Administration of Intelligence Test
October	Ch-3 Meeting Life Challenges	# Case-Study
November	Ch-5 Therapeutic Approaches Revision of the Syllabus	# Collage making

POLITICAL SCIENCE

BOOKS : 1. Contemporary World Politics

2. Politics in India Since Independence

MONTH	CHAPTERS
April	**Book-1: Contemporary World Politics** Ch.1: The End of Bipolarity Ch.2: Alternative Centres of Power
May	Ch.3 Contemporary South Asia Ch.4: International Organisations ● Discussion on CBSE board Practical
July	Ch.5: Security in the Contemporary World Ch.6: Environment and Natural Resources Ch.7: Globalisation
August	**Book-2: Politics in India Since Independence** Ch.1: Challenges of Nation Building Ch.2: Era of One- Party Dominance Ch.3: Politics of Planned Development
September	REVISION MID TERM EXAM
October	Ch.4: India's External Relations Ch.5: Challenges to and Restoration of the Congress System Ch.6: The Crisis of Democratic Order ● Submission of Project file
November	Ch.7: Regional Aspiration Ch.8: Recent Developments in India

BIOLOGY

BOOKS :
- **NCERT Biology**
- **Comprehensive Practical**

MONTH	CHAPTERS	PRACTICALS
April	**Unit- I Reproduction** 1. Reproduction in organisms 2. Sexual Reproduction in flowering plants **Unit- I Reproduction** 3. Human Reproduction 4. Reproductive health **Unit –II Genetics and evolution** 5. Principle of Inheritance and variation	➢ Study pollen germination on slide. ➢ Collect and study soil from at least two different soils and study them for texture, moisture content, PH and water holding capacity of soil. Correlate with the kinds of plants found in them. ➢ Collect water from two different water bodies around you and study them for PH, clarity and presence of any living organism. ➢ Study the presence of suspended particulate matter at two widely different sites.
May	**Unit- II Genetics and evolution** 6. Molecular basis of Inheritance 7. Evolution	➢ Study of plant population density by quadrat method.
July	**Unit – III Biology in human welfare** 8. Human health and diseases 9. Strategies for enhancement of food production 10. Microbes in human welfare	➢ Study of plant population frequency by quadrat method.
August--September	**Unit – IV Biotechnology** 11. Biotechnology principles and processes 12. Biotechnology and its application	➢ Prepare a temporary mount of onion root tip to study mitosis.
October	**Unit -V Ecology** 13. Organisms and population 14. Ecosystem	➢ Study the effect of different temperatures and three different PH on the activity of salivary amylase on starch**.**
November	**Unit- V Ecology** 15. Biodiversity and conservation 16. Environmental issues	➢ Isolation of DNA from plant materials such as Spinach, Green Pea seed, Papaya etc.

MATHEMATICS

MATHEMATICS
Books :
- **N.C.E.R.T. Part 1 & 2**

MONTH	CHAPTERS
April	Ch-3: Matrices
	Ch-4: Determinants
	Ch-1: Relations & Functions
May	Ch-2: Inverse Trigonometric Functions
	Ch-12: Linear Programming
July	Ch-5: Continuity & Differentiability
	Ch-6: Application of derivatives
Aug-Sep	Ch-7: Integration
	Ch-8: Application of Integration
October	Ch-9: Differential Equations
	Ch-10: Vectors
November	Ch-11: Three-Dimensional Geometry
	Ch-13: Probability

COMPUTER SCIENCE(083)

Book: Computer Science with Python
Author: Preeti Arora

S.No	Month	Name of the chapter/topic to be covered
1	Apr	**Unit III:** **Chapter -7 : Database Management** Database concepts: introduction to database concepts and its need •**Relational data model:** relation, attribute, tuple, domain, degree, cardinality, keys (candidate key, primary key, alternate key, foreign key) •**Structured Query Language:** introduction, Data Definition Language and Data Manipulation Language, data type (char(n), varchar(n), int, float, date), constraints (not null, unique, primary key), **Queries:** create database, use database, show databases, drop database, show tables, create table, describe table, alter table (add and remove an attribute, add and remove primary key), drop table, insert, delete, select, operators (mathematical, relational and logical), aliasing, distinct clause, where clause, in, between, order by, meaning of null, is null, is not null, like, update command, delete command,

		aggregate functions (max, min, avg, sum, count), group by, having clause,
2	**May**	**joins:** cartesian product on two tables, equi-join and natural join **Chapter -8 : Interface Python with SQL** Interface of python with an SQL database: connecting SQL with Python, performing insert, update, delete queries using cursor, display data by using fetchone(), fetchall(), rowcount, creating database connectivity applications
3	**Jul**	**Unit I: Computational Thinking and Programming - 2** **Chapter 1 : Revision of Python topics covered in Class XI**. **Chapter – 2 : Functions** Types of function (built-in functions, functions defined in module, user defined functions), creating user defined function, arguments and parameters, default parameters, Positional parameters.
4	**Aug**	function returning value(s), flow of execution, scope of a variable (global scope, local scope) **Exception Handling:** Introduction, handling exceptions using try-except - finally blocks
5	**Aug**	**Chapter – 4 : Data File Handling** **Introduction to files,** types of files (Text file, Binary file, CSV file), relative and absolute paths **Text file:** opening a text file, text file open modes (r, r+, w, w+, a, a+), closing a text file, opening a file using with clause, writing/appending data to a text file using write() and writelines(), reading from a text file using read(), readline() and readlines(), seek and tell methods, manipulation of data in a text file **Binary file:** basic operations on a binary file: open using file open modes (rb, rb+, wb, wb+, ab, ab+), close a binary file, import pickle module, dump() and load() method, read, write/create, search, append and update operations in a binary file **CSV file:** import csv module, open / close csv file, write into a csv file using csv.writer() and read from a csv file using csv.reader( )
6	**Sep**	**Chapter- 5 : Data Structure** Stack, operations on stack (push & pop), implementation of stack using list. **Unit II:** **Chapter- 6 : Computer Networks**

		Evolution of networking: introduction to computer networks, evolution of networking (ARPANET, NSFNET, INTERNET)
		●**Data communication terminologies:** concept of communication, components of data communication (sender,receiver, message, communication media, protocols), measuring capacity of communication media (bandwidth, data transfer rate), IP address, switching techniques (Circuit switching, Packet switching)
		●**Transmission media:** Wired communication media (Twisted pair cable, Co-axial cable, Fiber-optic cable), Wireless media (Radio waves, Micro waves, Infrared waves)
		●**Network devices** (Modem, Ethernet card, RJ45, Repeater, Hub, Switch, Router, Gateway, WIFI card)
		●**Network topologies and Network types:** types of networks (PAN, LAN, MAN, WAN), networking topologies (Bus, Star, Tree)
		●**Network protocol:** HTTP, FTP, PPP, SMTP, TCP/IP, POP3, HTTPS, TELNET, VoIP
		●**Introduction to web services:** WWW, Hyper Text Markup Language (HTML), Extensible Markup Language (XML), domain names, URL, website, web browser, web servers, web hosting
7	**Oct**	Project Development / Practical file submission / Revision Work
8	**Nov-Mar**	Remedial classes & Practical Examinations

INFORMATICS PRACTICES(065)

Book: Informatics Practices with Python
Author: Preeti Arora

S.No	Month	Name of the chapter/topic to be covered
1	Apr	**Unit 1: Data Handling using Pandas and Data Visualization Data Handling using Pandas** -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; Head and Tail functions; Selection, Indexing and Slicing. **Data Frames:** creation - from dictionary of Series, list of dictionaries, Text/CSV files; display; iteration;

2	May	**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. **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.
3	Jul	**Unit 2: 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 (). **Aggregate Functions:** MAX (), MIN (), AVG (), SUM (), COUNT (); using COUNT (*). Querying and manipulating data using Group by, Having, Order By
4	Aug	**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. **Unit 3:** **Introduction to Computer Networks** Introduction to networks, Types of network: LAN, MAN, WAN. Network Devices: modem, hub, switch, repeater, router, gateway
5	Sep	**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.
6	Oct	Project Development/ Practical file submission/ Revision Work
7	Nov-March	Remedial Class