

**ST. MARK'S SR.SEC.PUBLIC SCHOOL, JANAKPURI**  
**CLASS XII SYLLABUS**  
**ACADEMIC YEAR- 2023-24**

**ENGLISH**

**PERIODIC ASSESSMENT**

**READER (Flamingo)**- L1-The Last Lesson; L2- Lost Spring

**Poems** – P1-My Mother at Sixty-Six; P3-Keeping Quiet

**SUPPLEMENTARY READER (Vistas)** – L1-The Third Level; L2-The Tiger King

**READING SECTION**- Comprehension Passage,

**WRITING SKILLS**- Notice; Invitation

**MID TERM EXAMINATION**

**READER (Flamingo)** – L1-The Last Lesson; L2-Lost Spring; L3-Deep Water; L4-The Rattrap; L5-Indigo; L8-Going Places

**Poems** – P1-My Mother at Sixty-Six; P3-Keeping Quiet; P4-A Thing of Beauty; P6-Aunt Jennifer's Tigers

**SUPPLEMENTARY READER (Vistas)** – L1-The Third Level; L2-The Tiger King; L3-Journey to the end of the Earth; L4-The Enemy

**READING SECTION**- Comprehension Passage,

**WRITING SKILLS**- Notice; Invitation; Report; Letter to Editor

**PREBOARD EXAMINATION**

**READER (Flamingo)** – L6-Poets and Pancakes; L7-The Interview

**Poems** – P5-A Roadside Stand

**SUPPLEMENTARY READER (Vistas)** - L6-On the Face of It; L8-Memories of Childhood

**READING SECTION**- Comprehension Passage,

**WRITING SKILLS**- Article; Job Application

**\*Entire syllabus to be tested.**

**INTERNAL ASSESSMENT**- Assessment of Listening & Speaking Skills + ALS Project Work

**CHEMISTRY**

**PERIODIC ASSESSMENT**

Haloalkanes and haloarenes, Alcohols and phenols (excluding ethers)

**MID TERM EXAMINATION**

**Unit X: Haloalkanes and Haloarenes.**

Haloalkanes: Nomenclature, nature of C–X bond, physical and chemical properties, optical rotation mechanism of substitution reactions.

Haloarenes: Nature of C–X bond, substitution reactions (Directive influence of halogen in monosubstituted compounds only). Uses and environmental effects of - dichloromethane, trichloromethane, tetrachloromethane, iodoform, freons, DDT

**Unit XI: Alcohols, Phenols and Ethers**

Alcohols: Nomenclature, methods of preparation, physical and chemical properties (of primary alcohols only), identification of primary, secondary and tertiary alcohols, mechanism of dehydration, uses with special reference to methanol and ethanol.

Phenols: Nomenclature, methods of preparation, physical and chemical properties, acidic nature of phenol, electrophilic substitution reactions, uses of phenols.

Ethers: Nomenclature, methods of preparation, physical and chemical properties, uses.

### **Unit XII: Aldehydes, Ketones and Carboxylic Acids**

Aldehydes and Ketones: Nomenclature, nature of carbonyl group, methods of preparation, physical and chemical properties, mechanism of nucleophilic addition, reactivity of alpha hydrogen in aldehydes, uses.

Carboxylic Acids: Nomenclature, acidic nature, methods of preparation, physical and chemical properties; uses.

### **Unit XIII: Amines**

Amines: Nomenclature, classification, structure, methods of preparation, physical and chemical properties, uses, identification of primary, secondary and tertiary amines.

Diazonium salts: Preparation, chemical reactions and importance in synthetic organic chemistry.

## **PREBOARD EXAMINATION**

### **Unit II: Solutions**

Types of solutions, expression of concentration of solutions of solids in liquids, solubility of gases in liquids, solid solutions, Raoult's law, colligative properties - relative lowering of vapour pressure, elevation of boiling point, depression of freezing point, osmotic pressure, determination of molecular masses using colligative properties, abnormal molecular mass, Van't Hoff factor.

### **Unit III: Electrochemistry**

Redox reactions, EMF of a cell, standard electrode potential, Nernst equation and its application to chemical cells, Relation between Gibbs energy change and EMF of a cell, conductance in electrolytic solutions, specific and molar conductivity, variations of conductivity with concentration, Kohlrausch's Law, electrolysis and law of electrolysis (elementary idea), dry cell-electrolytic cells and Galvanic cells, lead accumulator, fuel cells, corrosion

### **Unit IV: Chemical Kinetics**

Rate of a reaction (Average and instantaneous), factors affecting rate of reaction: concentration, temperature, catalyst; order and molecularity of a reaction, rate law and specific rate constant, integrated rate equations and half-life (only for zero and first order reactions), concept of collision theory (elementary idea, no mathematical treatment), activation energy, Arrhenius equation.

### **Unit VIII: d and f Block Elements**

General introduction, electronic configuration, occurrence and characteristics of transition metals, general trends in properties of the first-row transition metals – metallic character, ionization enthalpy, oxidation states, ionic radii, colour, catalytic property, magnetic properties, interstitial compounds, alloy formation, preparation and properties of  $K_2Cr_2O_7$  and  $KMnO_4$ . Lanthanoids – Electronic configuration, oxidation states, chemical reactivity and lanthanoid contraction and its consequences. Actinoids - Electronic configuration, oxidation states and comparison with lanthanoids.

**Unit IX: Coordination Compounds 18 Periods Coordination compounds** - Introduction, ligands, coordination number, colour, magnetic properties and shapes, IUPAC nomenclature of mononuclear coordination compounds. Bonding, Werner's theory, VBT, and CFT; structure and stereoisomerism, the importance of coordination compounds (in qualitative analysis, extraction of metals and biological system).

**Unit X: Haloalkanes and Haloarenes. 15 Periods** Haloalkanes: Nomenclature, nature of C–X bond, physical and chemical properties, optical rotation mechanism of substitution reactions. Haloarenes: Nature of C–X bond, substitution reactions (Directive influence of halogen in monosubstituted compounds only). Uses and environmental effects of - dichloromethane, trichloromethane, tetrachloromethane, iodoform, freons, DDT.

**Unit XI: Alcohols, Phenols and Ethers 14 Periods** Alcohols: Nomenclature, methods of preparation, physical and chemical properties (of primary alcohols only), identification of primary, secondary and tertiary alcohols, mechanism of dehydration, uses with special reference to methanol and ethanol. Phenols: Nomenclature, methods of preparation, physical and chemical properties, acidic nature of phenol, electrophilic substitution

reactions, uses of phenols. Ethers: Nomenclature, methods of preparation, physical and chemical properties, uses.

**Unit XII: Aldehydes, Ketones and Carboxylic Acids 15 Periods Aldehydes and Ketones:** Nomenclature, nature of carbonyl group, methods of preparation, physical and chemical properties, mechanism of nucleophilic addition, reactivity of alpha hydrogen in aldehydes, uses. Carboxylic Acids: Nomenclature, acidic nature, methods of preparation, physical and chemical properties; uses.

**Unit XIII: Amines 14 Periods Amines:** Nomenclature, classification, structure, methods of preparation, physical and chemical properties, uses, identification of primary, secondary and tertiary amines.

Diazonium salts: Preparation, chemical reactions and importance in synthetic organic chemistry.

**Unit XIV: Biomolecules Carbohydrates - Classification (aldoses and ketoses), monosaccharides (glucose and fructose), D-L configuration oligosaccharides (sucrose, lactose, maltose), polysaccharides (starch, cellulose, glycogen); Importance of carbohydrates. Proteins -Elementary idea of - amino acids, peptide bond, polypeptides, proteins, structure of proteins - primary, secondary, tertiary structure and quaternary structures (qualitative idea only), denaturation of proteins; enzymes. Hormones - Elementary idea excluding structure.**

## PHYSICS

### PERIODIC ASSESSMENT

Chapter 1. Electric charges and fields, Chapter 2. Electrostatic Potential and Capacitance, Chapter 3. Current Electricity

### MID TERM EXAMINATION

Chapter 1. Electric charges and fields, Chapter 2. Electrostatic Potential and Capacitance, Chapter 3. Current Electricity, Chapter 4. Moving Charges and Magnetism, Chapter 5. Magnetism and Matter, Chapter 6. Electromagnetic Induction, Chapter 7. Alternating Current, Chapter 8. Electromagnetic Waves, Chapter 14. Semi-Conductor Electronics - Materials Devices and Simple Circuits

### PREBOARD EXAMINATION

Chapter 9. Ray Optics and Optical Instruments, Chapter 10. Wave Optics, Chapter 11. Dual Nature of Radiation and Matter, Chapter 12. Atoms, Chapter 13. Nuclei

**And all the chapters from mid term examination.**

## COMPUTER SCIENCE

### PERIODIC ASSESSMENT

#### **Unit I: Computational Thinking and Programming – 2**

- Revision of Python topics covered in Class XI.
- 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, 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.
- 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.

### MID TERM EXAMINATION ( periodic syllabus included)

- 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 writer(), writerow(), writerows() and read from a csv file using reader()

### **PREBOARD EXAMINATION**

- Data Structure: Stack, operations on stack (push & pop), implementation of stack using list.

#### **Unit III: 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), 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, joins: cartesian product on two tables, equi-join and natural join.
- Interface of python with an SQL database: connecting SQL with Python, performing insert, update, delete queries using cursor, display data by using connect (), cursor (), execute (), commit(), fetch one(), fetch all(), row count, creating database connectivity applications, use of %s format specifier or format() to perform queries

#### **Unit II: 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, Microwaves, 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

### **Complete Syllabus**

### **BUSINESS STUDIES**

#### **PERIODIC ASSESSMENT**

##### **Part A Principles and Functions of Management**

Chapter 1- Nature and Significance of Management, Chapter 2- Principles of Management

##### **Part B Business Finance and Marketing**

Chapter 11- Marketing

#### **MID TERM EXAMINATION**

##### **Part A Principles and Functions of Management**

Chapter 1- Nature and Significance of Management, Chapter 2- Principles of Management,

Chapter 3- Business Environment, Chapter 4- Planning, Chapter 5- Organising, Chapter 6- Staffing, Chapter 7- Directing, Chapter 8- Controlling

**Part B Business Finance and Marketing**

Chapter 11- Marketing Management

**Part C Project Work**

**PREBOARD EXAMINATION**

**Part A Principles and Functions of Management**

Chapter 1- Nature and Significance of Management, Chapter 2- Principles of Management, Chapter 3- Business Environment, Chapter 4- Planning, Chapter 5- Organising, Chapter 6- Staffing, Chapter 7- Directing, Chapter 8- Controlling

**Part B Business Finance and Marketing**

Chapter 9- Financial Management, Chapter 10- Financial Markets, Chapter 11- Marketing Management, Chapter 12- Consumer Protection

**And all the chapters from mid term examination.**

**Part C Project Work**

**MATHEMATICS**

**PERIODIC ASSESSMENT**

MATRICES, DETERMINANTS, INVERSE TRIGONOMETRIC FUNCTIONS

**MID TERM EXAMINATION**

1. RELATIONS AND FUNCTIONS (Types of relations: reflexive, symmetric, transitive and equivalence relations. One to one and onto functions.)
2. INVERSE TRIGONOMETRIC FUNCTIONS (Definition, range, domain, principal value branch. Graphs of inverse trigonometric functions.)
3. MATRICES (Types of matrices, transpose of a matrix, Addition and multiplication, Invertible matrices and proof of the uniqueness of inverse)
4. DETERMINANTS (minors, co-factors and applications of determinants. Adjoint and inverse of a square matrix. Consistency, inconsistency, solving system of linear equations)
5. CONTINUITY AND DIFFERENTIABILITY (Continuity and differentiability, chain rule, derivative of inverse trigonometric functions, implicit functions, Logarithmic differentiation, parametric forms. Second order derivatives)
6. APPLICATIONS OF DERIVATIVES (Rate of change of bodies, increasing/decreasing functions, maxima and minima)
7. INTEGRALS (Indefinite)

**PREBOARD EXAMINATION**

8. LINEAR PROGRAMMING (optimization, graphical method of solution for problems in two variables, feasible and infeasible regions (bounded or unbounded)
9. INTEGRALS [Fundamental theorem of calculus (without proof). Basic properties of definite integrals and evaluation of definite integrals.]
10. APPLICATION OF INTEGRALS (Applications in finding the area under simple curves, especially lines, circles/ parabolas/ellipses)
11. DIFFERENTIAL EQUATIONS (Solution of differential equations by method of separation of variables, homogeneous differential equations of first order and first degree, linear differential equation)
12. VECTORS (Definition, Geometrical Interpretation, properties and application of scalar (dot) product of vectors, vector (cross) product of vectors.
13. THREE- DIMENSIONAL GEOMETRY (Cartesian equation and vector equation of a line, skew lines, shortest distance between two lines. Angle between two lines)

**14. PROBABILITY** (Conditional probability, total probability, Bayes' theorem, Random variable and its probability distribution, mean of random variable.) **And all the chapters from mid term examination.**

**INTERNAL ASSESSMENT 20 marks = Periodic Tests :10 Marks + Mathematics Activities :10 Marks**

## **ACCOUNTANCY**

### **PERIODIC ASSESSMENT**

#### **Part A: Accounting for Partnership and Companies:**

Chapter 1: Accounting for Partnership: Fundamentals, Chapter 2: Goodwill: Nature and Valuation, Chapter 3: Change in Profit-Sharing Ratio among the Existing Partners, Chapter 4: Admission of a Partner

### **MID TERM EXAMINATION**

#### **Part A: Accounting for Partnership and Companies**

Chapter 1: Accounting for Partnership: Fundamentals, Chapter 2: Goodwill: Nature and Valuation, Chapter 3: Change in Profit-Sharing Ratio among the Existing Partners, Chapter 4: Admission of a Partner, Chapter 5: Retirement of a Partner, Chapter 6: Death of a Partner

#### **Part B: Financial Statement and Analysis**

Chapter 1: Financial Statements of Company, Chapter 2: Financial Statements Analysis, Chapter 3: Comparative & Common Size Statements, Chapter 4: Ratio Analysis

#### **PART C: PROJECT WORK**

### **PREBOARD EXAMINATION**

#### **Part A: Accounting for Partnership and Companies**

Chapter 1: Accounting for Partnership: Fundamentals, Chapter 2: Goodwill: Nature and Valuation, Chapter 3: Change in Profit-Sharing Ratio among the Existing Partners, Chapter 4: Admission of a Partner, Chapter 5: Retirement of a Partner, Chapter 6: Death of a Partner, Chapter 7: Dissolution of Partnership, Chapter 8: Company Accounts - Accounting for Share Capital, Chapter 9: Company Accounts - Accounting for Debentures

#### **Part B: Financial Statement and Analysis**

Chapter 5: Cash Flow Statement and **the entire syllabus of Mid-Term in Part B** (Chapter 1 to Chapter 4)

#### **PART C: PROJECT WORK**

## **INFORMATICS PRACTICES**

### **PERIODIC ASSESSMENT**

#### **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**

#### **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.

Data Handling using Pandas -I

#### **Revision of lists and Dictionary**

- Introduction to Python libraries- Pandas, Matplotlib.
- Data structures in Pandas - Series.  
Series: Creation of series from dictionary, scalar value; mathematical operations; series attributes, head and tail functions; selection, indexing and slicing.

### **MID TERM EXAMINATION**

#### **ENTIRE SYLLABUS OF PERIODICS**

- 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.  
Importing and exporting data between CSV file and data frames.

### **PREBOARD EXAMINATION**

#### **ENTIRE SYLLABUS OF PERIODICS AND MIDTERM**

##### **Introduction to Computer Networks**

- 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.

##### **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.

### **BIOLOGY**

#### **PERIODIC ASSESSMENT**

##### **Unit-VI Reproduction**

**Chapter-1: Sexual Reproduction in Flowering Plants-** Flower structure; development of male and female gametophytes; pollination - types, agencies and examples; out breeding devices; pollen-pistil interaction; double fertilization; post fertilization events - development of endosperm and embryo, development of seed and formation of fruit; special modes- apomixis, parthenocarpy, polyembryony; Significance of seed dispersal and fruit formation.

**Chapter-2: Human Reproduction-** Male and female reproductive systems; microscopic anatomy of testis and ovary; gametogenesis -spermatogenesis and oogenesis; menstrual cycle; fertilisation, embryo development up to blastocyst formation, implantation; pregnancy and placenta formation (elementary idea); parturition (elementary idea); lactation (elementary idea).

### **MID TERM EXAMINATION**

Chapter-1

Chapter-2

**Chapter-3: Reproductive Health** -Need for reproductive health and prevention of Sexually Transmitted Diseases (STDs); birth control - need and methods, contraception and medical termination of pregnancy



(MTP); amniocentesis; infertility and assisted reproductive technologies - IVF, ZIFT, GIFT (elementary idea for general awareness).

### **Unit-VII Genetics and Evolution**

**Chapter-4: Principles of Inheritance and Variation-** Heredity and variation: Mendelian inheritance; deviations from Mendelism – incomplete dominance, co-dominance, multiple alleles and inheritance of blood groups, pleiotropy; elementary idea of polygenic inheritance; chromosome theory of inheritance; chromosomes and genes; Sex determination - in humans, birds and honey bee; linkage and crossing over; sex linked inheritance - haemophilia, colour blindness; Mendelian disorders in humans - thalassemia; chromosomal disorders in humans; Down's syndrome, Turner's and Klinefelter's syndromes.

**Chapter-5: Molecular Basis of Inheritance** -Search for genetic material and DNA as genetic material; Structure of DNA and RNA; DNA packaging; DNA replication; Central Dogma; transcription, genetic code, translation; gene expression and regulation - lac operon; Genome, Human and rice genome projects; DNA fingerprinting.

**Chapter-6: Evolution- Origin of life;** biological evolution and evidences for biological evolution (palaeontology, comparative anatomy, embryology and molecular evidences); Darwin's contribution, modern synthetic theory of evolution; mechanism of evolution - variation (mutation and recombination) and natural selection with examples, types of natural selection; Gene flow and genetic drift; Hardy - Weinberg's principle; adaptive radiation; human evolution.

### **Unit-VIII Biology and Human Welfare**

**Chapter-7: Human Health and Diseases** -Pathogens; parasites causing human diseases (malaria, dengue, chikungunya, filariasis, ascariasis, typhoid, pneumonia, common cold, amoebiasis, ring worm) and their control; Basic concepts of immunology - vaccines; cancer, HIV and AIDS; Adolescence - drug and alcohol abuse.

**Chapter-8: Microbes in Human Welfare-** Microbes in food processing, industrial production, sewage treatment, energy generation and microbes as bio-control agents and bio-fertilizers. Antibiotics; production and judicious use.

### **PREBOARD EXAMINATION**

#### **Unit-IX Biotechnology and its Applications**

**Chapter-9: Biotechnology - Principles and Processes-** Genetic Engineering (Recombinant DNA Technology).

**Chapter-10: Biotechnology and its Applications-** Application of biotechnology in health and agriculture: Human insulin and vaccine production, stem cell technology, gene therapy; genetically modified organisms - Bt crops; transgenic animals; biosafety issues, biopiracy and patents.

#### **Unit-X Ecology and Environment**

**Chapter-11: Organisms and Populations-** Population interactions - mutualism, competition, predation, parasitism; population attributes - growth, birth rate and death rate, age distribution. **(Topics excluded: Organism and its Environment, Major Abiotic Factors, Responses to Abiotic Factors, Adaptations)**

**Chapter-12: Ecosystem-** Ecosystems: Patterns, components; productivity and decomposition; energy flow; pyramids of number, biomass, energy **(Topics excluded: Ecological Succession and Nutrient Cycles)**

**Chapter-13: Biodiversity and its Conservation** -Biodiversity-Concept, patterns, importance; loss of biodiversity; biodiversity conservation; hotspots, endangered organisms, extinction, Red Data Book, Sacred Groves, biosphere reserves, national parks, wildlife, sanctuaries and Ramsar sites.

**(INCLUDES -MIDTERM & PERIODIC )**

### **PHYSICAL EDUCATION**

#### **PERIODIC ASSESSMENT**

Unit-1 Management of Sporting Event, Unit-2 Children and Women in Sports

**MID TERM EXAMINATION** Unit-1 Management of Sporting Events, Unit-2 Children and Women in Sports, Unit-3 Yoga as a Preventive measure for Lifestyle Disease, Unit-4 Physical Education and Sports for CWSN, Unit-5 Sports and Nutrition, Unit-6 Test and Measurement in Sports



## **PREBOARD EXAMINATION**

Unit-7 Physiology and Injuries in Sports, Unit-8 Biomechanics in sports, Unit-9 Psychology and sports, Unit-10 Training in Sports

+ Midterm Syllabus

**Practical Exam-30 Marks**

## **ECONOMICS**

### **PERIODIC ASSESSMENT**

#### **MACRO ECONOMICS PART-A**

##### **Unit 2: Money and Banking**

Money – meaning and functions, supply of money - Currency held by the public and net demand deposits held by commercial banks. Money creation by the commercial banking system. Central bank and its functions (example of the Reserve Bank of India): Bank of issue, Govt. Bank, Banker's Bank, Control of Credit through Bank Rate, Cash Reserve Ratio (CRR), Statutory Liquidity Ratio (SLR), Repo Rate and Reverse Repo Rate, Open Market Operations, Margin requirement.

##### **Unit 3: Determination of Income and Employment**

Aggregate demand and its components. Propensity to consume and propensity to save (average and marginal). Short-run equilibrium output; investment multiplier and its mechanism. Meaning of full employment and involuntary unemployment. Problems of excess demand and deficient demand; measures to correct them - changes in government spending, taxes and money supply.

#### **INDIAN ECONOMIC DEVELOPMENT PART-B**

Unit 6: Development Experience (1947)

A brief introduction of the state of Indian economy on the eve of independence.

## **MID TERM EXAMINATION**

### **Part A: Introductory Macroeconomics**

#### **Unit 1: National Income and Related Aggregates**

What is Macroeconomics? Basic concepts in macroeconomics: consumption goods, capital goods, final goods, intermediate goods; stocks and flows; gross investment and depreciation. Circular flow of income (two sector model); Methods of calculating National Income - Value Added or Product method, Expenditure method, Income method. Aggregates related to National Income: Gross National Product (GNP), Net National Product (NNP), Gross Domestic Product (GDP) and Net Domestic Product (NDP) - at market price, at factor cost; Real and Nominal GDP GDP Deflator, GDP and Welfare

#### **Unit 2: Money and Banking**

Money – meaning and functions, supply of money - Currency held by the public and net demand deposits held by commercial banks. Money creation by the commercial banking system. Central bank and its functions (example of the Reserve Bank of India): Bank of issue, Govt. Bank, Banker's Bank, Control of Credit through Bank Rate, Cash Reserve Ratio (CRR), Statutory Liquidity Ratio (SLR), Repo Rate and Reverse Repo Rate, Open Market Operations, Margin requirement.

#### **Unit 3: Determination of Income and Employment**

Aggregate demand and its components. Propensity to consume and propensity to save (average and marginal). Short-run equilibrium output; investment multiplier and its mechanism. Meaning of full employment and involuntary unemployment. Problems of excess demand and deficient demand; measures to correct them - changes in government spending, taxes and money supply.

#### **Unit 4: Government Budget and the Economy**

Government budget - meaning, objectives and components. Classification of receipts - revenue receipts and capital receipts; Classification of expenditure – revenue expenditure and capital expenditure. Balanced, Surplus and Deficit Budget – measures of government deficit.

#### **Unit 5: Balance of Payments**

Balance of payments account - meaning and components; Balance of payments – Surplus and Deficit Foreign exchange rate - meaning of fixed and flexible rates and managed floating. Determination of exchange rate in a free market, Merits and demerits of flexible and fixed exchange rate. Managed Floating exchange rate system

## **Part B: Indian Economic Development**

### **Unit 6: Development Experience (1947-90) and Economic Reforms since 1991**

A brief introduction of the state of Indian economy on the eve of independence.

Indian economic system and common goals of Five-Year Plans. Main features, problems and policies of agriculture (institutional aspects and new agricultural strategy), industry (IPR 1956; SSI – role & importance) and foreign trade.

Economic Reforms since 1991: Features and appraisals of liberalisation, globalisation and privatisation (LPG policy); Concepts of demonetization and GST

## **PART C- PROJECT WORK**

### **PREBOARD EXMINATION**

#### **Part B: Indian Economic Development**

##### **Unit 7: Current challenges facing Indian Economy**

Human Capital Formation: How people become resource; Role of human capital in economic development; Growth of Education Sector in India

Rural development: Key issues - credit and marketing - role of cooperatives; agricultural diversification; alternative farming - organic farming

Employment: Growth and changes in work force participation rate in formal and informal sectors; problems and policies

Sustainable Economic Development: Meaning, Effects of Economic Development on Resources and Environment, including global warming

**Unit 8: Development Experience of India:** A comparison with neighbours India and Pakistan India and China Issues: economic growth, population, sectoral development and other Human Development Indicators

**PREBOARD SYLLABUS ALSO INCLUDES ENTIRE SYLLABUS OF MID TERM EXAMINATION. Part C: Project in Economics (20 MARKS)**

## **SOCIOLOGY**

### **PERIODIC ASSESSMENT**

The demographic structure of Indian society, Social institution: continuity and change, Patterns of social inequality and exclusion.

### **MID TERM EXAMINATION**

The challenges of cultural diversity- Structural change, Cultural change, Change and development in rural society, Change and development in industrial society, Social movements.

**MID TERM also includes periodic syllabus**

### **PREBOARD EXMINATION**

The demographic structure of Indian society, Social institution: continuity and change, Patterns of social inequality and exclusion, The challenges of cultural diversity, Structural change, cultural change, Change and development in rural society, Change and development in industrial society, Social movements.

**And all the chapters from mid term exam**

## **POLITICAL SCIENCE**

### **PERIODIC ASSESSMENT**

1. The End of Bipolarity
2. Contemporary Centres of Power

## **MID TERM EXAMINATION BOOK: CONTEMPORARY WORLD POLITICS**

### **Chapter 1 - The End of Bipolarity**

- a) The Soviet System
- b) Gorbachev and the disintegration
- c) Causes and Consequences of disintegration of Soviet Union
- d) Shock Therapy and its Consequences
- e) New entities in world politics – Russia, Balkan States, Central Asian States
- f) India's relations with Russia and other post-communist countries

### **Chapter 2 - Contemporary Centers of Power**

- a) European Union
- b) Association of Southeast Asian Nations
- c) Rise of China as an economic power
- d) Japan and South Korea as emerging powers

### **Chapter 3 - Contemporary South Asia**

- a) Military and Democracy in Pakistan and Bangladesh
- b) Monarchy and Democracy in Nepal
- c) Ethnic Conflict and Democracy in Sri Lanka
- d) India-Pakistan Conflicts
- e) India and its Neighbors
- f) Peace and Cooperation

### **Chapter 4 - International Organizations**

- a) Meaning and importance of International Organizations
- b) Evolution of the UN
- c) Structure and function of International Organizations
- d) Principal Organs of UN
- e) Reform of the UN after Cold War
- f) Reform of Structures, Processes and Jurisdiction of the UN
- g) India and the UN Reforms
- h) Key Agencies: IMF, World Bank, WTO, ILO, IAEA.
- i) NGO: Amnesty International, Human Rights Watch.
- j) Implications and Future of International Organizations

### **Chapter 5 - Security in the Contemporary World**

- a) Meaning and Type of Security.
- b) Traditional concept of Security
- c) Non-tradition notions of Security.
- d) New Sources of Threats
- e) Cooperative Security
- f) India's Security strategy

### **Chapter 6 - Environment and Natural Resources**

- a) Environmental Concerns
- b) Global Commons
- c) Common but differentiated Responsibilities
- d) India's Stand on Environment Issues
- e) Environmental Movements
- f) Resource Geopolitics
- g) Rights of Indigenous peoples

### **Chapter 7 - Globalization**

- a) Concept of globalization
- b) Causes and Consequences of globalization
- c) India and globalization    d) Resistance to globalization    e) India and resistance to globalization

## **BOOK: POLITICS IN INDIA SINCE INDEPENDENCE**

### **Chapter 1 - Challenges of Nation Building**

- a) Challenges for the new Nation, Three Challenges.
- b) Partition: Displacement and Rehabilitation, Consequences of Partition.
- c) Integration of Princely States, The problem Government's approach Hyderabad Manipur
- d) Reorganization of States

### **Chapter 2 - Era of One-Party Dominance**

- a) Challenge of building Democracy
- b) Congress dominance in the first three general elections, Nature of Congress dominance, Congress as social and ideological coalition Tolerance and management of Factions
- c) Emergence of opposition parties

### **Chapter 3 - Politics of Planned Development**

- a) Political contestation. Ideas of Development, Planning, Planning Commission
- b) The Early Initiatives, The First Five Year Plan, Rapid Industrialization.

## **Class discussions on additional reference material provided in the curriculum 2023-24 + Project Work PREBOARD EXAMINATION**

### **Chapter 4 - India's External Relations**

- a) International Context
- b) The Policy of Non-Alignment. Nehru's role, Distance from two camps, Afro Asian Unity
- c) Peace and conflict with China, The Chinese Invasion 1962 War and Peace with Pakistan Bangladesh War 1971.
- d) India's Nuclear Policy

### **Chapter 5 - Challenges to and Restoration of the Congress System**

- a) Challenge of Political Succession from Nehru to Shastri; From Shastri to Indira Gandhi
- b) Fourth General Election 1967 - Context of the Election, Non Congressism, Electoral Verdict Coalitions and Defections
- c) Split in the Congress Indira vs the Syndicate Presidential Election 1969
- d) The 1971 Election and Restoration of Congress, The outcome and Restoration of the congress system

### **Chapter 6 - The Crisis of Democratic Order**

- a) Background to Emergency, Economic Context, Gujarat and Bihar Movements, Conflict with Judiciary
- b) Declaration of Emergency - Crisis and response, Consequences of emergency
- c) Lessons of the Emergency.
- d) Politics after Emergency - Lok Sabha Elections 1977, Janata Government, Legacy

### **Chapter 7 - Regional Aspirations**

- a) Region and the Nation - Indian Approach - Areas of Tension - Jammu and Kashmir, Roots of the Problem, External and Internal disputes, Politics since 1948, Insurgency and After; 2022 and Beyond
- b) Punjab - Political Context, Cycle of Violence, Road to Peace
- c) The Northeast Demand for autonomy - Secessionist Movements, Movements against outsiders - Assam and National Integration

### **Chapter 8 - Recent Developments in Indian Politics**

- a) Context of 1990s
- b) Era of Coalition and Alliance Politics
- c) Political rise of the Backward Classes, Mandal Implemented, Political Fallouts
- d) Communalism, Secularism and Democracy, Ayodhya Dispute, Demolition and after
- e) Emergence of New Consensus
- f) Lok Sabha Elections 2004
- g) Growing Consensus

## **Class discussions on additional reference material provided in the curriculum 2023-24 + Entire syllabus of Mid Term and assessment of Project work.**

## **PSYCHOLOGY**

### **PERIODIC TEST-1 EXAMINATION**

**CHAPTER 1: Variations in Psychological Attributes:** Individual differences in human functioning, Assessment of psychological attributes, Assessment methods, Intelligence, Psychometric Theories of Intelligence, Information

Processing Theory: Planning, Attention-arousal and Simultaneous successive Model of Intelligence, Triarchic Theory of Intelligence; Theory of Multiple Intelligences, Individual Differences In Intelligence.

**CHAPTER 2: Self and Personality**

### **MID-TERM EXAMINATION**

CHAPTER 1: Variations in Psychological Attributes

CHAPTER 2: Self and Personality

CHAPTER 3: Meeting Life Challenges

CHAPTER 4: Psychological Disorders (till 'Schizophrenia spectrum and other psychotic disorders')

### **PERIODIC TEST-2 EXAMINATION**

CHAPTER 6: Attitude and Social Cognition CHAPTER 7: Social Influence and Group Processes

### **PRE-BOARD EXAMINATION**

(Full Syllabus) + (Practical)

CHAPTER 1: Variations in Psychological Attributes

CHAPTER 2: Self and Personality

CHAPTER 3: Meeting Life Challenges

CHAPTER 4: Psychological Disorders

CHAPTER 5: Therapeutic Approaches

CHAPTER 6: Attitude and Social Cognition CHAPTER 7: Social Influence and Group Processes