

ARMY PUBLIC SCHOOL CANTT. KANPUR

SYLLABUS FOR MONTH APRIL/MAY CLASS:12 SESSION 2020-21

SUBJECT	SR.NO	CHAPTER NO. & NAME	TOPICS TO BE COVERED
P H Y S I C S	1)	1.ELECTRIC CHARGES & FIELD	ELECTRIC CHARGES, CONSERVATION OF CHARGES
			COULOMB'S LAW & FORCE DUE TO MULTIPLE CHARGES
			ELECTRIC FIELD & ITS PHYSICAL SIGNIFICANCE
			CONCEPT OF ELECTRIC DIPOLES
			ITS E.F.I IN DIFFERENT CASES
			TORQUE EXPERIENCED BY DIPOLE & WORK DONE
			GAUSS THEOREM & ITS APPLICATIONS
			APPLICATION BASED QUESTIONS
			NUMERICAL BASED QUESTIONS
			TYPICAL QUESTIONS
	2)	2.CAPACITOR & CAPACITANCE	ELECTROSTATIC POTENTIAL & POTENTIAL DIFF.
			POTENTIAL DUE TO CHARGES & DIPOLES
			RELATION b/w FIELD & POTENTIAL
			EQUIPOTENTIAL SURFACES
			CAPACITORS & THEIR USES
			CAPACITANCE OF DIFFERENT CAPACITORS
			EFFECT OF DIELECTRICS ON CAPACITORS
			APPLICATION BASED QUESTION
	NUMERICALS		
	3)	3.CURRENT & ELECTRICITY	ELECTRIC CURRENT, DRIFT VELOCITY, OHM'S LAW
			OHMIC & NON OHMIC CONDUCTORS
DEPENDENCY OF RESISTANCE ON DIFF. FACTORS			
COLOUR CODE OF CARBON RESISTORS			
MOBILITY OF ELECTRON & RELAXATION TIME			
COMBINATION OF RESISTORS & APPLICATION			
CONCEPT OF A CELL, E.M.F & INTERNAL RESISTANCE			
COMBINATION OF CELLS & APPLICATION			
C H E M I S T R Y	1	SOLUTION	TYPES OF SOLUTION
			EXPRESSING CONCENTRATION OF SOLUTION
			SOLUBILITY OF A SOLID/GAS IN A LIQUID
			VAPOUR PRESSURE OF LIQUID SOLUTIONS
			RAOULT'S LAW AS A SPECIAL CASE OF HENRY'S LAW
			VAPOUR PRESSURE OF SOLID LIQUID SOLUTIONS
			IDEAL AND NON IDEAL SOLUTIONS
			COLLIGATIVE PROPERTIES & DETERMINATION OF MOLAR MASS
			RELATIVE LOWERING OF VAPOUR PRESSURE
	2	SOLID STATES	ELEVATION OF BOILING POINTS
			DEPRESSION OF FREEZING POINT
			OSMOSIS & OSMOTIC PRESSURE
			ABNORMAL MOLAR MASS
			TYPES OF SOLID
			DISTINGUISH B/W AMORPHOUS AND CRYSTALLINE
			TYPES OF CRYSTALLINE SOLID
			CRYSTAL LATTICE AND UNIT CELL
			CLOSE PACKING OF PARTICLES
			TYPES OF VOIDS AND CLOSE PACKED STRUCTURES
			CALCULATE PACKING EFFICIENCY AND DENSITY OF UNIT CELL
			IMPERFECTION IN SOLID STATES
ELECTRICAL AND MAGNETIC PROPERTIES OF SOLIDS AND THEIR STRUCTURE			

M A T H E M A T I C S	1	INVERSE TRIGONOMETRIC FUNCTION	.PRINCIPAL VALUE	
			.PROPERTIES OF INVERSE FUNCTION	
			.MISCELLANEOUS	
			.TYPES OS MATRICES	
			.OPERATION ON MATRICES	
	2	MATRICES	.TRANPOSE & SYMMETRIC MATRICES	
			.ELEMENTARY TRANSFORMATION & INVERSE OF MATRIX MISCELLANEOUS	
	3	DETERMINANT	.EVALUATION OF DETERMINANT	
			.PROPERTIES OF DETERMINANT	
			.AREA OF TRIANGLE	
			.MINOR & COFACTOR	
			.ADJOINT OF MATRIX	
			.SOLUTION TO SIMULTANEOUS EQUATION MISCELLANEOUS	
	B I O L O G Y	1	1.REPRODUCTION IN ORGANISMS	ASEXUAL REPRODUCTION IN PLANTS AND ANIMALS
SEXUAL REPRODUCTION IN PLANTS AND ANIMALS				
PREFERTILISATION , FERTILISATION AND POST FERTILISATION EVENTS				
2		5.PRINCIPLES OF INHERITANCE AND VARIATION	.MENDEL'S LAW OF INHERITANCE	
			SEX DETERMINATION AND GENETIC DISORDERS	
			.BACK CROSS AND TEST CROSS WITH EXAMPLES	
			.MENDEL'S LAWS WITH MONOHYBRID AND DIHYBRID CROSS	
			.INCOMPLETE DOMINANCE,MULTIPLE ALLELISM,CODOMINANCE	
			.PLEIOTROPY AND POLYGENIC INHERITANCE	
			. CHROMOSOMAL THEORY OF INHERITANCE	
.LINKAGE AND RECOMBINATION				
3		6.MOLECULAR BASIS OF INHERITANCE	The DNA and RNA WORLD	
			SEARCH FOR GENETIC MATERIAL EXPERIMENTS	
			CENTRAL DOGMA	
			REPLICATION OF DNA	
			TRANSCRIPTION	
			GENETIC CODE,GENE EXPRESSION AND DNA FINGERPRINTING	
			TRANSCRIPTION AND TRANSLATION PROCESS	
			REGULATION OG GENE EXPRESSION	
HUMAN GENOME PROJECT				
1	MYSQL SQL REVISION TOUR	CAPABILITIES OF SQL		
		CONCEPT OF DATA TYPES,DATA DEFINITION LANGUAGE,		
		DATA MANIPULATION LANGUAGE, SIMPLE QUERIES USING		
		SELECT COMMANDS, CREATING TABLE, CONSTRAINTS,		
		INSERT DATA INTO ANOTHER TABLE,MODIFY DATA, DELETING		
		DATA, ALTERING DATA, DROPPING TABLE, SQL JOINS		
		INSERT DATA INTO ANOTHER TABLE,MODIFY DATA, DELETING		
		BOARD RELATED QUESTIONS		

I.P	2	MORE ON SQL	INTRODCUTION OF ORDERING RECORDS IN RESULT BY
			ORDER BY CLAUSE, OF MULTIPLE COLUMNS, ORDERING DATA
			ON THE BASIS OF AN EXPRESSION, CUSTOM SORT ORDER,
			AGGREGATE FUNCTIONS, TYPES OF SQL FUNCTIONS, GROUP
			BY, NESTED GROUPS, PLACING CONDITION ON GROUPS BY
			HAVING CLAUSE.
	3	INTRODUCTION TO SOFTWARE ENGINEERING	QUESTIONS
			BOARD RELATED QUESTIONS
			ABOUT SOFTWARE ENGINEERING, NEED FOR SE, SOFTWARE
			PROCESS, ITS ACTIVITIE, SPECIFICATION, DESIGN AN D
			IMPLEMENTATION, VALIDATION, EVOLUTION, SOFTWARE PROCESS
			MODELS, WATERFALL, EVOLUTIONARY AND COMPONENT BASED
4	AGILE METHODS AND PRACTICAL ASPECTS OF SOFTWARE ENGINEERING	QUESTIONS	
		BOARD RELATED QUESTIONS	
		ABOUT AGILE SOFTWARE DEVELOPMENT, PAIR PROGRAMMING,	
		SCRUM, ROLES AND RESPONSIBILITIES, EVENTS, VERSION CONTROL	
		SYSTEM, ITS TYPES, GIT, BUSINESS USE CASE DIAGRAM	
		QUESTIONS	
C.S	1	COMPUTER NETWORKS - I	ABOUT NETWORKING, NEEDS OF NETWORKING, GOALS
			OF NETWORKING, EVOLUTION OF NETWORKING, TYPES
			OF NETWORKING, ABOUT PAN, LAN, MAN AND WAN,
			DIFFERENT TYPES OF TRANSMISSION MEDIA, DATA
			COMMUNICATION TECHNOLOGIES, DIFFERENT TYPES
			OF NETWORK TOPOLOGIES, NETWORK DEVICES,
			COMMUNICATION PROTOCOLS, INTERNETWORKING
			TERMS AND CONCEPTS, INTRODUCTION TO OPEN SOURCE
			BASED SOFTWARE, NETWORK SECURITY AND ITS CONCEPTS.
			QUESTIONS
			BOARD RELATED QUESTIONS
			2
	OF NETWORKING, EVOLUTION OF NETWORKING, TYPES		
	OF NETWORKING, ABOUT PAN, LAN, MAN AND WAN,		
	DIFFERENT TYPES OF TRANSMISSION MEDIA, DATA		
	COMMUNICATION TECHNOLOGIES, DIFFERENT TYPES		
	OF NETWORK TOPOLOGIES, NETWORK DEVICES,		
	COMMUNICATION PROTOCOLS, INTERNETWORKING		
	TERMS AND CONCEPTS, INTRODUCTION TO OPEN SOURCE		
	BASED SOFTWARE, NETWORK SECURITY AND ITS CONCEPTS.		
	QUESTIONS		
	BOARD RELATED QUESTIONS		
	3	SOCIETY, LAW AND ETHICS	
			PALGIARISM, DIGITAL PROPERTY RIGHTS, OPEN SOURCE
PHILOSOPHY AND SOFTWARE LICENCES, DEFINITIONS OF OSS,			
PRIVACY, ONLINE FRAUD, CYBER CRIME, COMPUTER FORENSICS,			
TECHNOLOGY AND SOCIETY ECONOMIC BENEFITS, E WASTE			
MANAGEMENT, DISPOSAL, IDENTIFYING THEFT, DISSABILITY			
ISSUES WHILE TEACHING AND USING COMPUTER			
QUESTIONS			
BOARD RELATED QUESTIONS			

	4	MySQL SQL REVISION TOUR	<p>CAPABILITIES OF SQL</p> <p>CONCEPT OF DATA TYPES, DATA DEFINITION LANGUAGE, DATA MANIPULATION LANGUAGE, SIMPLE QUERIES USING SELECT COMMANDS, CREATING TABLE, CONSTRAINTS, INSERT DATA INTO ANOTHER TABLE, MODIFY DATA, DELETING DATA, ALTERING DATA, DROPPING TABLE, SQL JOINS</p> <p>QUESTIONS</p> <p>BOARD RELATED QUESTIONS</p>
P H Y S I C A L E D U C A T I O N	1	PALNNING IN SPORTS	- Meaning & Objectives of Planning
			- Various Committees & its Responsibilities (pre, during & post)
			- Tournament – Knock – out , League or - Round Robin & Combination
			- Procedure to Draw Fixture – Knock – out (Bye & seeding) & League (Staircase &
			- Intramural & Extramural – Meaning , Objectives & its Significance
			- Specific Sports Programme (Sports Day, Health Run , Run For Fun , Run Fr Specific Cause & Run For Unity)
			- Balance Diet & Nutrition : Macro & Micro Nutrition
	2	SPORTS & NUTRITION	- Nutritive & Non – Nutritive Components of Diet
			- Eating For Weight Control – A Healthy Weight , The Pitfalls of Dieting , Food Intolerance & Food Myths
	3	YOGA & LIFESTYLE	- Asana as preventive measures
- Obesity : Procedure , Benefits & contraindications for Vajrasana , Hastasana, Trikonasana , Ardh Matsyendrasana			
-Diabetes : Procedure , Benefits & contraindications for Bhujangasana , Paschimottasana , Pavan Muktasana , Ardh Matsyendrasana			
- Asthema : Procedure , Benefits & contraindications for Sukhasana , Chakrasana , Gomukhasana , Parvatasana , Bhujangasana , Paschimottasana , Matsyasna			
- Hypertension : Tadasana , Vajrasana , Pavan muktasana , Ardh Chakrasana, Bhujangasana, Sharasana			
- Back Pain : Tadasana, Ardh Matsyendrasana, Vakrasana , Shalabhasana, Bhujangasana			

A C C O U N T A N C Y	1	1. FUNDAMENTAL OF PARTNERSHIP FIRM	1.Partnership features, Partnership deed.
			2.Provisions of the Indian Partnership Act 1932 in the absence of partnership
			3.Fixed v/s fluctuating capital accounts.
			4. Preparation of profit and Loss appropriation account and Partners' capital
			5.Past adjustments relating to interest on capital, interest on drawings, salary and profit sharing ratio.
			6. Guarrantee of Profit.
	2	2. NATURE AND VALUATION OF GOODWILL	1. Meaning and nature of Goodwill
			2. Factors affecting Goodwill.
			3. Need and Method of Valuation of Goodwill.
			4 Average profit method, Super profit method
			5. capitalization method
	3	3. CHANGE IN PROFIT SHARING RATIO AMONG PARTNERS	1. Sacrificing ratio and Gaining Ratio
			2. Accounting for revaluation of assets and reassessment of liabilities.
			3. Treatment of reserves, accumulated profits and loss.
			4. Preparation of Revaluation account and balance sheet.
			5. Journal Entries
	4	4. ADMISSION OF A PARTNER	1. Calculation of new profit sharing ratio, sacrificing ratio and gaining ratio.
			2. Treatment of premium for goodwill
			3. Treatment of revaluation of assets and reassessment of liabilities.
			4. Treatment of reserves and accumulated profit and accumulated losses.
5. Preparation of Revaluation A/c, Partners' capital A/c and Balance Sheet.			
6. Adjustments of Partners' capital Account.			
5	5. RETIREMENT OF A PARTNER	1. Treatment of Goodwill	
		2. Treatment of reserves, accumulated profit & accumulated loss	
B U S I N E S S S T U D I E S	1	1. NATURE AND SIGNIFICANCE OF MANAGEMENT	3. Preparation of Revaluation A/c
			1. Management: Concept, Objectives and Importance.
			2. Management as Science, Art and Profession.
			3. levels of Management.
			4. Management functions- Planning, Organising, staffing, directing and
	5. Coordination – Concept and Importance		
	2	2. PRINCIPLES OF MANAGEMENT	1. Principles of Management- Concept and Significance.
			2. Fayol's Principles of Management.
			3. Taylor's Scientific Management Principles and Techniques.
	3	3. BUSINESS ENVIRONMENT	1. Business Environment- Concept and Importance.
			2. Dimensions of Business Environment- Economic, Social, Technnological, Political and Legal.
			3. Demonetization –Concept and features.
			4. Impact of Government policy changes on business with special reference to Liberalization, privatization and Globalization in India.
	4	4. PLANNING	1. Concept, Importance and Limitation.
			2. Planning Process.
			3. Single use and Standing Plans, Objectives, Strategy, Policy, Procedure, Method, Rule, Budget and programme.

	5	ORGANISING	1. Concept and Importance. 2. Organising Process		
E C O N O M I C S	1	Chapter:1 (Some basic concepts of macro-economics)	Consumption goods, Capital goods, Final goods, Intermediate Goods; Stocks and Flows; Gross Investment and Depreciation. Circular flow of income in two sector economy-Household Sector and producing sector		
	2	Chapter:2 (National Income and Related Aggregate)	Aggregate related to National Income: Gross National Product(GNP), Net National Product(NNP), Gross Domestic Product(GDP), Net GDP and NDP at market price and at factor cost Real and Nominal GDP.		
	3	Chapter:3 (Methods of calculating National Income)	Methods of calculating National Income—Value added or Product method, Expenditure Method and Income Method Steps involved in all the three method, Precautions taken In all the three methods and Calculation by all the three method.		
	H I S T O R Y	1	THEME-1 BRICKS, BEADS AND BONES	1. 1.SUBSISTENCE STRATEGIES 2. 2.PREVALENCE OF AGRICULTURE 3. 3.UNIQUE FEATURES OF MOHENJODARO 4. 4.SOCIAL OR ECONOMIC DIFFERENCES 5. 5.CRAFT PRODUCTION IN INDUS VALLEY 6. 6.STRATEGIES FOR PROCURING RAW MATERIALS 7. 7.HARAPPAN SEALS ,RULING AUTHORITY 8. 8.THE END OF THE CIVILISATION 9. 9.DISCOVERING THE HARAPPAN CIVILISATION 10. 10.RELIGIOUS PRACTICES OF THE HARAPPANS	
		2	THEME-2 KINGS, FARMERS AND TOWNS	1. DEVELOPMENTS BETWEEN 1900 BCE AND 600 BCE 2. SIXTEEN MAHAJANAPADAS 3. SOURCES TO UNDERSTAND MAURYAN EMPIRE 4. NEW NOTIONS OF KINGSHIP 5. CHANGING COUNTRYSIDE 6. DIFFERENCES IN RURAL SOCIETY 7. TOWNS AND TRADE IN EARLY HISTORIC PERIOD 8. COINS AND KINGS 9. HOW WERE BRAHMI AND KHAROSTHI INSCRIPTIONS DECIPHERED?	
		3	THEME-3 KINSHIP, CASTE AND CLASS	1. THE CRITICAL EDITION OF THE MAHABHARATA 2. VARIED RULES PRACTICES IN THE EARLY SOCIETY 3. SOCIAL DIFFERENCES: WITHIN AND BEYOND THE 4. FRAMEWORK OF CASTE 5. . JATIS AND SOCIAL MOBILITY 6. SOCIAL DIFFERENCES 7. BEYOND THE FOUR VARNAS 8. SOCIAL IMPLICATIONS OF ACCESS TO RESOURCES AND STATUS 9. A SOCIAL CONTRACT 10. HISTORIANS AND THE MAHABHARATA 11. DATED OF MAHABHARATA 12. FINDING HISTORICAL TRUTH FROM ARCHAEOLOGY 13. MAHABHARATA IS A DYNAMIC TEXT	

GEOGR APHY	1	1.Human Geography Nature and Scope	1. Geography as a field of study is Integrative, empirical & Practical
			2. Nature of Human Geography
			3.The Naturalisation of Humans
			4 Humanisation of Nature
			5 Fields & Sub fields of Human geography
	2	2.The World Population ,Distribution, Density & Growth	1Patterns of population distribution in the World.
			2 Factors influencing the Dist. Of population.
			3 Population Growth
			4 Components of population change,
			5 Demographic Transition , Population Control Measures
	3	3. Population Composition	1. Sex Composition
			2 Age Structure & Age -Sex Pyramid
			3 Rural Urban composition ,
			4 Occupational structure
			5 Ageing Population
	4	4. Human Development	1 Growth and Development
			2 Four Pillars of Human Development
			3 Approaches to Human Development
			4 International comparison
	5	5. Primary Activities	1 Hunting & Gathering
2 Nomadic herding & Commercial livestock rearing			
3 Agriculture-Primitive subsistence farming			
4 Plantation , Jhuming & Truck farming			
5 Mixed farming ,Dairy farming			
6 Mining & Factors affecting it			

P O L I T I C A L S C I E N C E	1	1.THE COLD WAR ERA	1. CUBAN MISSILE CRISIS
			2. THE EMERGENCE OF TWO POWER BLOCKS
			3 CHALLENGES TO BIPOLARITY
			4 NEW INTERNATIONAL ECONOMIC ORDER
			5 INDIA AND THE COLD WAR ERA
	2	2.THE END OF BIPOLARITY	1. SOVIET SYSTEM
			2. SHOCK THERAPY
			3 CONSEQUENCES OF DISINTEGRATION
			4 INDIA AND POST COMMUNIST COUNTRIES
	3	3.US HEGEMONY IN WORLD POLITICS	1. BEGINNING OF THE NEW WORLD ORDER
			2 9/11 AND THE GLOBAL WAR ON TERROR
			3 THE IRAQ INVASIONCONSTRAINTS ON AMERICAN POWER
			4 INDIA'S RELATIONSHIP WITH US
	4	4.ALTERNATIVES CENTRES OF POWER	1 EUROPEAN UNION
			2 ASEAN
			3 THE RISE OF THE CHINESE ECONOMY
			4 INDIA CHINA RELATIONS
	5	5.CONTEMPORARY SOUTH ASIA	1 SOUTH ASIA(SAARC)
			2 THE MILITARY AND DEMOCRACY IN PAKISTAN
			3 DEMOCRACY IN BANGLADESH
			4 DEMOCRACY IN NEPAL
			5 PEACE AND COOPERATION
	6	6.INTERNATIONAL ORGANISATIONS	1. UNITED NATIONS
			2 REFORM OF THE UN
3 INDIA AND THE UN REFORMS			
4 THE UN IN A UNIPOLAR WORLD			
P S Y C H O L O G Y	1	1. Variations in Psychological Attributes	1. Introduction
			2. Assessment of Psychological Attributes
			3. Individual Differences in Human Functioning
			4. Intelligence
			5. Culture and Intelligence
			6. Emotional Intelligence
			7. Creativity
	2	2. Social Influence and Group Processes	1. Nature and Formation of Groups
			2. Type of Groups
			3. Influence of Group on Individual Behaviour
			4. Conformity, Compliance and Obedience
			5. Cooperation and Competition
			6. Intergroup Conflict
3	3. Psychology and Life	1. Human-Environment Relationship	
		2. Environmental Effects on Human Behaviour	
		3. Promoting Pro-environmental Behaviour	
		4. Psychology and Social Concerns	
		5. Institutional Representation of Democracy	
4	4.Developing Psychological Skills	1. Introduction	
		2. Developing as an effective Psychologist	
		3. General Skills, Observational Skills, Specific Skills	

H I N D I	1	भक्तिन (पाठ)	1. प्रश्न उत्तर (गद्यांश)
			2. प्रश्न उत्तर (पाठ)
			3. पाठ की व्याख्या
	2	आत्म परिचय(कविता)	1. प्रश्न उत्तर (पद्यांश)
			2. प्रश्न उत्तर (कविता)
			3. प्रश्न उत्तर (काव्य सौंदर्य)
			4. कविता की व्याख्या
	3	एक गीत (कविता)	"
	4	पतंग (कविता)	"
	5	काव्यता क बहान (कविता)	"
	6	बीत सीधा या पर(कविता)	"
	7	उषा(कविता)	1. प्रश्न उत्तर (पद्यांश)
			2. प्रश्न उत्तर (कविता)
			3. प्रश्न उत्तर (काव्य सौंदर्य)
			4. कविता की व्याख्या
8	कर्म में जड़ जकारण (कविता)	"	

E N G L I S H	1	The Last Lesson
	2	Tiger King
	3	My mother at sixty six (poem)
	4	Writing skills- Poster
	5	Lost Spring
	6	Journey to the end of the Earth
	7	Writing skills- Speech and Article writing
	8	An elementary school classroom in a slum (poem)
	9	Writing skills -Letter writing
	10	Writing skills -Notice writing
	11	The Enemy
	12	Deep Water
	13	Reading section- Note making
	14	The Rattrap
	15	Keeping Quiet (poem)
	16	Should wizard hit Mommy
	17	Indigo
	18	Writing skills- Advertisements
	19	On the face of it
	20	A thing of beauty (poem)
	21	Writing skills- Report writing
	22	Poets and Pancakes
	23	Evan tries an O level