ST. MARY'S SENIOR SECONDARY SCHOOL, RUDRAPUR

ANNUAL SYLLABUS (2024-25)

CLASS XI

ENGLISH

MONTH	CHAPTER N0.	CHAPTER NAME
April	Writing skill Hornbill 1 Snapshot	Advertisement Writing The Portrait of a Lady The Summer of the beautiful white horse
May	Poetry 1 Hornbill Writing Skill	A Photograph Discovering Tut PT—1 Poster
July	Snapshot 2 Hornbill 3 Poetry 2	We're not afraid to die The Address The Laburnum Top
August	Poetry 3 Writing Grammar	The Voice of the Rain Speech Integrated Grammar P.T II
September	(play) Snap. 5 Snap. 7 Hornbill 7	Mother's Day Birth The Adventure Clauses Half Yearly Examination
October	Hornbill 8 Poetry 4 Poetry 5	Silk Road Father to Son PT--III
November	Writing Poem Writing	Debate Childhood Note-Making
December	Unseen Passages Revision	Comprehension Writing Tasks P.T III
January	Snap. 8	The Tale of Melon City Revision
February		Annual Examination

SUBJECT- CHEMISTRY

MONTH	CHAPTER NO. & NAME	Lab ACTIVITIES
April	▪ Chapter.01- Some basic concepts of chemistry ▪ Chapter.02- Structure of Atom	▪ Preparation of 0.05M solution of sodium hydroxide
May	▪ Chapter.03- Classification of elements and periodicity in properties ▪ **Periodic Test-I**	▪ Demonstration of types of reactions ▪ Worksheet
July	▪ Chapter.04- Chemical bonding and molecular structure ▪ Chapter.05- Thermodynamics	• Detection of acid and base solution by PH paper with some natural samples
August	▪ Chapter.06- Equilibrium ▪ Revision ▪ **Periodic Test-II**	• Detection of Acid and Base by using indicators
September	▪ **Half Yearly Examination & Revision**	
October	▪ Chapter7- Organic Chemistry- some basic principle and technique **Period test-III** ▪ Chapter8- Hydrocarbon	• Detection of cation and anion in given sample of salt
November	▪ Chapter.09- Redox reaction	• Class Test
December	▪ **Periodic Test-IV**	• Worksheet

January	▪ Revision	
February	▪ Annual Examination	

MONTHS	PHYSICS CURRICULUM (042) (2024-25) CLASS XI
APRIL	**Unit I: Physical World and Measurement** **Chapter–2: Units and Measurements** Need for measurement: Units of measurement; systems of units; SI units, fundamental and derived units. significant figures. Dimensions of physical quantities, dimensional analysis and its applications Mathematical tools.
MAY	PT-1 **Unit II: Kinematics** **Chapter–3: Motion in a Straight Line** Frame of reference, Motion in a straight line, Elementary concepts of differentiation and integration for describing motion, uniform and non- uniform motion, and instantaneous velocity, uniformly accelerated motion, velocity - time and position-time graphs. Relations for uniformly accelerated motion (graphical treatment).
MAY/JULY	**Chapter–4: Motion in a Plane** Scalar and vector quantities; position and displacement vectors, general vectors and their notations; equality of vectors, multiplication of vectors by a real number; addition and subtraction of vectors, Unit vector; resolution of a vector in a plane, rectangular components, Scalar and Vector product of vectors. Motion in a plane, cases of uniform velocity and uniform acceleration- projectile motion, uniform circular motion. **Unit III: Laws of Motion** **Chapter–5: Laws of Motion** Intuitive concept of force, Inertia, Newton's first law of motion; momentum and Newton's second law of motion; impulse; Newton's third law of motion.
AUGUST	Law of conservation of linear momentum and its applications. Equilibrium of concurrent forces, Static and kinetic friction, laws of friction, rolling friction, lubrication. Dynamics of uniform circular motion: Centripetal force, examples of circular motion (vehicle on a level circular road, vehicle on a banked road).

	PT-II **Unit IV: Work, Energy and Power**
SEPTEMBER OCTOBER	**Chapter–6: Work, Energy and Power** Work done by a constant force and a variable force; kinetic energy, work- energy theorem, power. Notion of potential energy, potential energy of a spring, conservative forces: non-conservative forces, motion in a vertical circle; elastic and inelastic collisions in one and two dimensions.
	HALFYEARLY EXAMINATION
	PT-III **Unit V:Motion of System of Particles and Rigid Body** **Chapter–7: System of Particles and Rotational Motion** Centre of mass of a two-particle system, momentum conservation and Centre of mass motion. Centre of mass of a rigid body; centre of mass of a uniform rod. Moment of a force, torque, angular momentum, law of conservation of angular momentum and its applications. Equilibrium of rigid bodies, rigid body rotation and equations of rotational motion, comparison of linear and rotational motions. Moment of inertia, radius of gyration, values of moments of inertia for simple geometrical objects (no derivation).
NOVEMBER	**Unit VI: Gravitation** **Chapter–8: Gravitation** Kepler's laws of planetary motion, universal law of gravitation. Acceleration due to gravity and its variation with altitude and depth. Gravitational potential energy and gravitational potential, escape speed, orbital velocity of a satellite **Unit VII: Properties of Bulk Matter** **Chapter–9: Mechanical Properties of Solids** Elasticity, Stress-strain relationship, Hooke's law, Young's modulus, bulk modulus, shear modulus of rigidity (qualitative idea only), Poisson's ratio; elastic energy. **Chapter–10: Mechanical Properties of Fluids** Pressure due to a fluid column; Pascal's law and its applications (hydraulic lift and hydraulic brakes), effect of gravity on fluid pressure. Viscosity, Stokes' law, terminal velocity, streamline and turbulent flow, critical velocity, Bernoulli's theorem and its simple applications. Surface energy and surface tension, angle of contact, excess of pressure across a curved surface, application of surface tension ideas to drops, bubbles and capillary rise.
DECEMBER	

JANUARY	**Chapter–11: Thermal Properties of Matter** Heat, temperature, thermal expansion; thermal expansion of solids, liquids and gases, anomalous expansion of water; specific heat capacity; Cp, Cv - calorimetry; change of state - latent heat capacity. Heat transfer-conduction, convection and radiation, thermal conductivity, qualitative ideas of Blackbody radiation, Wein's displacement Law, Stefan's law . Unit VIII: Thermodynamics PT-IV **Chapter–12: Thermodynamics** Thermal equilibrium and definition of temperature, zeroth law of thermodynamics, heat, work and internal energy. First law of thermodynamics, Second law of thermodynamics: gaseous state of matter, change of condition of gaseous state -isothermal, adiabatic, reversible, irreversible, and cyclic processes **Unit IX:Behavior of Perfect Gases and Kinetic Theory of Gases** **Chapter–13: Kinetic Theory** Equation of state of a perfect gas, work done in compressing a gas. Kinetic theory of gases - assumptions, concept of pressure. Kinetic interpretation of temperature; rms speed of gas molecules; degrees of freedom, law of equi-partition of energy (statement only) and application to specific heat capacities of gases; concept of mean free path, Avogadro's number. **Unit X:Oscillations and Waves** **Chapter–14: Oscillations** Periodic motion - time period, frequency, displacement as a function of time, periodic functions and their applications.
FEBRUARY	Simple harmonic motion (S.H.M) and its equations of motion; phase; oscillations of a loaded spring- restoring force and force constant; energy in S.H.M. Kinetic and potential energies; simple pendulum derivation of expression for its time period. **Chapter–15: Waves** Wave motion: Transverse and longitudinal waves, speed of travelling wave, displacement relation for a progressive wave, principle of superposition of waves, reflection of waves, standing waves in strings and organ pipes, fundamental mode and harmonics, Beats. Revision. ANNUAL EXAMINATION

XI SYLLABUS OF MATHEMATICS 2024-25

MONTH	CHAPTER TOPICS	ACTIVITY
APRI	**Sets**:Sets and their representations. Empty set. Finite and Infinite sets. Equal sets. Subsets. Subsets of a set of real numbers especially intervals (with notations). Power set. Universal set. **Relations & Functions** :Ordered pairs, Cartesian product of sets. Number of elements in the cartesian product of two finite sets. Cartesian product of the sets of real	ACTIVITY ON PICTORIAL OF SETS
	3. Trigonometric Functions Expressing sin (x±y) and cos (x±y) in terms of sinx, siny, cosx & cosy and their simple application. Deducing identities like the following UNIT TEST	MATH ACTIVITY ON GRAPHS
JULY	**4. Complex Numbers and Quadratic Equations**: Need for complex numbers, especially √1, to be motivated by inability to solve some of the quardratic equations. Algebraic properties of complex numbers.. **5. Permutations and Combinations** Fundamental principle of counting	PASCAL TRIANGLE
AUGUST	**7. Binomial Theorem** History, statement and proof of the binomial theorem for positive integers **6. Sequence and Series** Sequence and Series. Arithmetic Progression (A.P.). Arithmetic Mean (A.M.) Geometric Progression (G.P.), general term of a G.P., sum of n terms of a G.P., Arithmetic and Geometric UNIT TEST	

SEPTEMBER	**Straight Lines**: Brief recall of two dimensional geometry from earlier classes. Shifting of origin. Slope of a line and angle between two lines. HALF YEARLY EXAMINATION	ACTIVITES BASED ON GENERATION OF CONIC SECTION
OCTOBER	2. **Conic Sections** :Sections of a cone: circles, ellipse, parabola, hyperbola; a point, a straight line and a pair of intersecting lines as a degenerated case of a conic section. Standard equations and simple properties of parabola, ellipse and hyperbola. Standard equation of a circle. UNIT TEST	Limits and their geometrical meaning,
NOVEMBE DECEMBE	**Limit and derivative** Concept of Limits and Derivatives **1. Statistics** Measures of dispersion; Range, mean deviation, variance and standard deviation of ungrouped/grouped data. Analysis of frequency distributions with equal means but different variances. UNIT TEST	
JANUARY	Conditional probability, multiplication theorem on probability. independent events, total probability, Baye's theorem, Random variable and its probability distribution REVISION OF CHAPTERS AND EXTRA QUESTIONS	LAB ACTIVITIY

PHYSICAL EDUCATION CURRICULUM (2024-2025)

MONTH	UNIT	TOPIC
APRIL	FEBRUAR trends and career in physical education.	• Meaning & definition of physical education, Aims and objectives of physical education. • Various career options and courses available in physical education. • Importance of physical education and physical education programmed in India in post-independence. • Advancement technology in sports in physical education. • Meaning of Khelo India and fit India programme. • Vision and objectives of Khelo India and fit India.

FINAL XAMINATION

APRIL MAY JULY AUGUST	Olympic value education Yoga Unit VI Test & Measurement in Sport Unit VII fundamental of anatomy, physiology and kinesiology	• History of ancient and modern Olympic games. • Describe summer and winter Olympic games. • Rules of ancient Olympic and modern Olympic games. • Olympic symbol, ideals, objectives and values of Olympism. • Olympic movement structure-IOC, NOC, IFS, other members. PERIODIC TEST-1 • Meaning and importance of yoga. • Introduction to astang yoga. • Yogic kriyas 9shat karma). • Pranayama and its types. • Active lifestyle and stress management through yoga. • Define test, measurement and evaluation. • Importance of test, measurement and evaluation in sports. • Calculation of BMI, waist- ratio, skin fold measurement (3-site). • Somato (endomorph, mesomorph & ectomorph). • Measurement of health-related fitness. PERIODIC TEST-2 • Definition and importance of anatomy and physiology in exercise and sports. • Function of skeletal system, classification of bones, and types of joints. • Properties and functions of muscles. • Structure and functions of circulatory system and heart. • Structure and functions of respiratory system.

SEPTEMBER OCTOBER OCTOBER NOVEMBER	Unit VIII Biomechanics & Sports Unit IX Psychology & Sports Unit X Training and doping in Sports	• Definition and importance of kinesiology and biomechanics in sports. • Principles of biomechanics. • Kinetic and kinematic in sports. Types of body movement-flexion, extension, abduction, adduction, rotation circumduction, supination & pronation. • Axis and planes- concept and its application in body movement. **Half yearly examination** **PERIODIC TEST-3** • Definition and importance of psychology in physical education and sports. • Developmental characteristics at different stages of development. • Adolescent problems & their management. • Team cohesion and sports. • Introduction to psychological attributes: Attention, resilience, menta toughness. • Concept and principles of sports training. • Training load: over load, adaptation and recovery. • Warming up &limbering down-types, method importance. • Concept of skill, technique, tactics &strategies. • Concept of doping and its disadvantages.
DECEMBER JANUARY FABURARY		**PERIODIC TEST-4** **REVISION** **FINAL EXAMINATION**

Computer Science (Python 083) Syllabus-(2024-25)

Class XI (Theory+ Practical)

Month	Chapter Name	Periods Theory	Practical	Activity
April	➤ Computational Thinking and Programming-1	45	30	Boolean Logic and Test Quiz
July	➤ Computer Systems and Organisation	40	30	Make a Chart on Computer Generation
August	➤ Conditional Statement and Iteration in Python	10	10	Make a PPT to Explain IF_ELSE step by step
September	Half Yearly Exams			
October November	➤ String and list in Python. ➤ Debugging in programming.	20	30	Super First Five. 15 Program Quiz
December	➤ Tuples in Python. ➤ Dictionary in Python.	30	35	Python Programing File Creation. 25 Programs
January	➤ Society, Law and Ethics. ➤ Revisions ➤ File and Project Work	20	15	Project Work and Chart on Society, Law and Ethics on Internet.
February	Final Exams			

Information Technology (802) Syllabus-(2024-25)

Class XI (Theory+ Practical)

Month	Unit Name	Theory	Practical
April	**Part-A** Unit 1: Communication Skills-III **Part-B** Unit -1: Computer Organization	10	02
May	**Part-A** Unit 2: Self-Management Skills-III **Part-B** Unit -2: Networking and Internet	11	03
	PERIODIC TEST 1ST		
July	**Part-A** Unit 3: ICT Skills-III **Part-B** Unit -2: Networking and Internet (cybercrime and the need of Cyber Security)	12	02
August	**Part-B** Unit-3: Office Automation Tools **Part-A** Unit 4: Entrepreneurial Skills-III	08	07
	PERIODIC TEST 2nd		
	HALF YEARLY PRACTICAL		
September	**Part-B** Unit-4: RDBMS	04	02
	HALF YEARLY EXAMS		
October	**Part-B** Unit-4: RDBMS	06	08
	PERIODIC TEST 3RD		
November	**Part-B** Unit-5: Fundamentals of Java Programming **Part-A** Unit 5: Green Skills-III	06	08
December	**Part-B** Unit-5: Fundamentals of Java Programming	07	05
	PERIODIC TEST 4th		
January	Practical File, Project Work Revision Work + Lab Visit	03	05
	ANNUAL EXAMINATION PRACTICAL		
February	ANNUAL EXAMINATION		

YOGA(841) syllabus-(2024-25)

MONTH	UNIT NAME
April	Part-A Unit-1:Communication Skill-III a- Methods of communication. b- communication styles. c- writing skills. Part-B Unit-1: Introduction to yoga and yogic practices-I a- yoga Etymology,definition, Aim, objective and misconception. b- Yoga origin, history and development.
May	Part-A Unit- 2 Self-management Skill-I a-Introduction. b- Impressive appearance and grooming. c- Teamwork skill d- Time management strategies and techniques. Part-B Unit-B- Introduction to yoga and yogic practices-I

	a- Rules and regulations to be followed by yoga practitioners. b- Introduction to major school of yoga. c- Introduction to yogic practices.
	PERIODIC TEST -1
July	Part-A Unit- 3: ICT Skills-III a- introduction to word processing. b- software packages for word processing. Part-B Unit-2: Introduction to Yogic texts-I a- Introduction and study of patanjali yoga sutra including memorization of selected sutra. b- Introduction and study of Bhagavad Gita including memorization of selected slokas.
August	Part- B Unit-2: Introduction to Yogic texts-I a- Introduction of hatha pradpika. Part- A Unit- 3: ICT Skills-III a- Opening and exiting the word processor.

	b- Creating a document.
	PERIODIC TEST -2
September	HALF YEARLY EXAMS
October	Part-A Unit- 4: Entrepreneurial Skill-III a- Entrepreneurial skills. b- Types of business activities. Part-B Unit- 2: Introduction to Yogic texts-I a- Introduction and study of Gheranda samhita.
	PERIODIC TEST -3
November	Part-B Unit-3: Yoga for health promotion-I a- Brief introduction to the human body. b- Role of yoga for health promotion. c- Yogic attitudes and practices. Part-B Unit-4:Entrepreneurial Skill-III a- Entrepreneurial Values. b- Entrepreneurial Attitudes.

December	Part-A Unit-5: Green skill a-Introduction. b- Components of green economy c- Water management d- Policy initiatives for the green economy in india. e- Stakeholder in green economy and their role Part-B Unit-3: Yoga for health promotion-I a- Holistic approach of yoga towards health and diseases. b- Introduction to yoga diet and its relevance and importance in yoga Sadhana. c- Dincharya and Ritucharya with respect of yogic lifestyle.
	PERIODIC TEST -4
January	Practical File/ project work Revision Work/ demonstration of skills.
February	ANNUAL EXAMINATION