# ST. MARY'S SENIOR SECONDARY SCHOOL, RUDRAPUR

## ANNUAL SYLLABUS (2024-25)

## CLASS XI

## ENGLISH

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

SUBJECT- CHEMISTRY

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

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| January | ▪ Revision | |
| February | ▪ Annual Examination | |

| MONTHS | PHYSICS CURRICULUM (042) (2024-25)<br>CLASS XI |
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| APRIL | Unit I: Physical World and Measurement<br>Chapter–2: Units and Measurements<br>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<br>Mathematical tools. |
| MAY | PT-1<br>**Unit II: Kinematics**<br>**Chapter–3: Motion in a Straight Line**<br>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<br>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.<br>Motion in a plane, cases of uniform velocity and uniform acceleration- projectile motion, uniform circular motion.<br>Unit III: Laws of Motion<br>Chapter–5: Laws of Motion<br>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.<br>Dynamics of uniform circular motion: Centripetal force, examples of circular motion (vehicle on a level circular road, vehicle on a banked road). |

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| | **PT-II** |
| | **Unit IV: Work, Energy and Power** |
| SEPTEMBER | **Chapter–6: Work, Energy and Power** |
| OCTOBER | Work done by a constant force and a variable force; kinetic energy, work- energy theorem, power.<br>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<br>Centre of mass motion. Centre of mass of a rigid body; centre of mass of a uniform rod.<br>Moment of a force, torque, angular momentum, law of conservation of angular momentum and its applications.<br>Equilibrium of rigid bodies, rigid body rotation and equations of rotational motion, comparison of linear and rotational motions.<br>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.<br>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.<br>Viscosity, Stokes' law, terminal velocity, streamline and turbulent flow, critical velocity, Bernoulli's theorem and its simple applications.<br>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 | |

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| | **Chapter–11: Thermal Properties of Matter**<br>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.<br>Heat transfer-conduction, convection and radiation, thermal conductivity, qualitative ideas of Blackbody radiation, Wein's displacement Law, Stefan's law .<br>Unit VIII: Thermodynamics<br>PT-IV<br>**Chapter–12: Thermodynamics**<br>Thermal equilibrium and definition of temperature, zeroth law of thermodynamics, heat, work and internal energy. First law of thermodynamics,<br>Second law of thermodynamics: gaseous state of matter, change of condition<br>of gaseous state -isothermal, adiabatic, reversible, irreversible, and cyclic processes |
| JANUARY | **Unit IX:Behavior of Perfect Gases and Kinetic Theory of Gases**<br>**Chapter–13: Kinetic Theory**<br>Equation of state of a perfect gas, work done in compressing a gas.<br>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.<br>**Unit X:Oscillations and Waves**<br>**Chapter–14: Oscillations**<br>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.<br>Kinetic and potential energies; simple pendulum derivation of expression for its time period.<br>**Chapter–15: Waves**<br>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.<br>Revision.<br>ANNUAL EXAMINATION |

## SUBJECT-BIOLOGY

| Month | Week | Chapter No. and Name | Activities |
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|---|---|---|---|
| April | 1<br>2<br>3<br>4 | CH-1 Living World<br>CH-1 Living World<br>CH-2 Biological classification<br>CH-2 Biological classification | Given Worksheet<br>Assignment |
| May | 1<br>2<br>3 | CH-3 Plant Kingdom<br>Periodic Test-I<br>Periodic Test-I | Class Test<br>To study of osmosis by potato osmometer |
| July | 1<br>2<br>3<br>4 | CH-4 Animal kingdom<br>CH-5 Morphology of flowering plant<br>CH-6&7 Anatomy of flowering plant & Structural organization in animals<br>CH-6&7 Anatomy of flowering plant & Structural organization in animals | Given Worksheet<br>Assignment<br>Class Test |
| August | 1<br>2<br>3<br>4 | Periodic Test- II & Revision<br>CH-8&9 Cell's the unit of life & Biomolecules<br>CH-10 Cell cycle and cell division<br>CH-10 Cell cycle and cell division | To demonstrate the plasmolysis method by Rheo/petunia leaf<br>Given Worksheet<br>Assignment<br>Class Test |
| September | 1-4 | Half yearly Examination | |
| October | 1<br>2<br>3<br>4 | Periodic Test- III & Revision<br>CH-13 Photosynthesis in higher plants<br>CH-13 Photosynthesis in higher plants<br>CH-14 Respiration in plants | To identify the presence of chlorophyll in Non-plant<br>Given Worksheet<br>Assignment<br>Class Test |
| November | 1<br>2<br>3<br>4 | CH-14 Respiration in plants<br>CH-15 Plant growth & development<br>CH-17 Breathing & Exchange of gases<br>CH-18&19 Body fluids & circulation and Excretory products & their elimination | Class Test<br>Given Worksheet<br>Assignment<br>Class Test<br>Given Worksheet<br>Assignment |
| December | 1<br>2 | CH-18&19 Body fluids & circulation and Excretory products & their elimination<br>CH-20&21 Locomotion & | Class Test<br>Given Worksheet<br>Assignment |

# PHYSICAL EDUCATION CURRICULUM (2024-2025)

| MONTH | | UNIT | TOPIC |
|---|---|---|---|
| APRIL | Changing trends in career and physical education. | 1-4 | • Meaning & definition of physical education, Aims and objectives of physical education.<br>• Various career options and courses available in physical education.<br>• Importance of physical education and physical education programmed in India in post-independence.<br>• Advancement technology in sports in physical education.<br>• Meaning of Khelo India and fit India programme.<br>• Vision and objectives of Khelo India and fit India. |
| January | | 1-4 | |
| February | | 1-4 | |

movement and Neural control & coordination

Class Test

Periodic Test-IV & Revision

CH-22 Chemical coordination and integration

Revision

Annual Examination

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

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| SEPTEMBER<br><br>OCTOBER<br>OCTOBER<br><br>NOVEMBER | Unit VIII Biomechanics & Sports<br><br>Unit IX Psychology & Sports<br><br>Unit X Training and doping in Sports | • Definition and importance of kinesiology and biomechanics in sports.<br>• Principles of biomechanics.<br>• Kinetic and kinematic in sports. Types of body movement-flexion, extension, abduction, adduction, rotation circumduction, supination & pronation.<br>• Axis and planes- concept and its application in body movement.<br><br>**Half yearly examination**<br><br>**PERIODIC TEST-3**<br><br>• Definition and importance of psychology in physical education and sports.<br>• Developmental characteristics at different stages of development.<br>• Adolescent problems & their management.<br>• Team cohesion and sports.<br>• Introduction to psychological attributes: Attention, resilience, menta toughness.<br><br>• Concept and principles of sports training.<br>• Training load: over load, adaptation and recovery.<br>• Warming up &limbering down-types, method importance.<br>• Concept of skill, technique, tactics &strategies.<br>• Concept of doping and its disadvantages. |
| DECEMBER<br>JANUARY<br>FABURARY | | **PERIODIC TEST-4**<br><br>**REVISION**<br><br>**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<br><br>November | ➤ String and list in Python.<br>➤ Debugging in programming. | 20 | 30 | Super First Five. 15 Program Quiz |
| December | ➤ Tuples in Python.<br>➤ Dictionary in Python. | 30 | 35 | Python Programing File Creation. 25 Programs |
| January | ➤ Society, Law and Ethics.<br>➤ Revisions<br>➤ 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**<br>Unit 1: Communication Skills-III<br>**Part-B**<br>Unit -1: Computer Organization | 10 | 02 |
| May | **Part-A**<br>Unit 2: Self-Management Skills-III<br>**Part-B**<br>Unit -2: Networking and Internet | 11 | 03 |
| | PERIODIC TEST 1ST | | |
| July | Part-A<br>Unit 3: ICT Skills-III<br>Part-B<br>Unit -2: Networking and Internet (cybercrime and the need of Cyber Security) | 12 | 02 |
| August | **Part-B**<br>Unit-3: Office Automation Tools<br>**Part-A**<br>Unit 4: Entrepreneurial Skills-III | 08 | 07 |
| | PERIODIC TEST 2nd | | |
| | HALF YEARLY PRACTICAL | | |
| September | **Part-B**<br>Unit-4: RDBMS | 04 | 02 |
| | HALF YEARLY EXAMS | | |
| October | **Part-B**<br>Unit-4: RDBMS | 06 | 08 |
| | PERIODIC TEST 3RD | | |
| November | Part-B<br>Unit-5: Fundamentals of Java Programming<br>Part-A<br>Unit 5: Green Skills-III | 06 | 08 |
| December | Part-B<br>Unit-5: Fundamentals of Java Programming | 07 | 05 |
| | PERIODIC TEST 4th | | |
| January | Practical File, Project Work<br>Revision Work + Lab Visit | 03 | 05 |
| | ANNUAL EXAMINATION PRACTICAL | | |
| February | ANNUAL EXAMINATION | | |

# YOGA(841) syllabus-(2024-25)

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

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

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

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