ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

FOR GOD AND COUNTRY

SYLLABUS PLANNER FOR THE ACADEMIC YEAR 2021-2022 | TERM: FIRST TERM | TEACHER'S NAME: MR. ARNAB PAUL CHOWDHURY

NO. OF WORKING DAYS: 64 | SUBJECT: CHEMISTRY | CLASS: 11 | SECTION: A1 & A2

MONTH	LESSONS	TOPICS COVERED	HOMEWORK	CLASS WORK
JUNE	Some Basic Concept of Chemistry & Redox Equilibria	A) Mole concept, Eudiometry, Stoichiometry, Concept of equivalent mass, Concept of different types of concentration terms i.e. Molarity, Normality, Molality, Mole fraction B) Formality and numerical problems based on them. Concept of oxidation state, Determination of O.N., balancing chemical equation by Oxidation Number method and Ion electron method(in acidic, basic and neutral medium)	Numerical, reasoning based questions and MCQ would be given as homework.(Question pattern in accordance to WBCHSE)	A) The marks distribution of the WBCHSE council for the relevant chapter and model question-answer would be discussed. Road map problems and conceptual questions would be solved.(Ref: Test papers and previous years WBCHSE question papers) B) Methodology for writing stoichiometric equation and solving mole based questions, numerical based on concept of strength would be discussed(Ref: Test papers and previous years WBCHSE question papers)
JULY	Structure of Atom, Periodic Table & Chemical Bonding	A) Rutherford's atomic model and rectifications being made by Neil's Bohr, concept of Quantisation, Sommerfeld's model, Bohr model, Photoelectric effect, Atomic spectra, Wave particle dualism, Concept of quantum numbers, writing electronic configuration, Schrodinger wave equation(Elementary idea) B) Development of periodic table, periodic laws, discussion on Periodic properties in detail. C) Ionic bond and Lattice energy, Fajan's rule, Basic covalent bonding theories like Kossel-Lewis model, VSEPR theory	Numerical based on Atomic structure from different aspects and assignments related to the arrangement of periodic properties in order should be discussed. .(Question pattern in accordance to WBCHSE)	A) Calculation involving atomic spectral lines, De- Broglie hypothesis, Heisenberg's uncertainty principle, quantum numbers etc. B) Conceptual question answers on periodic properties and Chemical Bonding. (Ref: Test papers and previous years WBCHSE question papers)
AUGUST	Chemical Bonding(CONTINUE) & States of Matter	A) Molecular Orbital Theory (MOT), Concept of dipole moment and hydrogen bonding. B) Gas laws (Boyle's law, Charles Law, Amagat's law, Graham's law of diffusion, Dalton's law) Numerical based on gas laws, Ideal gas equation, Real gases, and Van der waals equation of real gases, Concept of critical constants, Andrew's graph and Amagat's graph.	Numerical based on Atomic structure from different aspects and assignments related to the arrangement of periodic properties in order should be discussed. .(Question pattern in accordance to WBCHSE)	Numerical and conceptual question-answer, analytical questions based on WBCHSE pattern. (Ref: Test papers and previous years WBCHSE question papers) NOTE: Revision for 1st Term examination.
SEPTEMBER	Thermodynamics and Chemical Equilibria 1st TERM EXAMINATION STARTS FROM 16TH SEPTEMBER SYLLABUS: THE TOPICS COVERED UP TO SEPTEMBER 2021	A) Thermodynamic Laws(1st, 2nd, 3rd and Zeroth law), numerical based of First law of thermodynamics, Hess's Law(numerical), Numerical based on second law of thermodynamics, Gibb's free energy change and spontaneity of a chemical process B) Concept of chemical equilibrium, Equilibrium constants(K_w, K_c and K_x), numerical based on equilibrium constant, Le-Chatelier's principle and effect of different external parameters on the state of equilibrium	Numerical, reasoning based questions and MCQ would be given as homework. .(Question pattern in accordance to WBCHSE)	Numerical and conceptual question-answer, analytical questions based on WBCHSE pattern. (Ref: Test papers and previous years WBCHSE question papers) NOTE: Revision for 1st Term examination.

Teachers are requested to prepare a LESSON PLAN for each Topic to be taught. The Lesson plans are to be submitted along with the monthly planner.

Signature of the Teacher: Chowdhury.. 15.03.2021

Submitted on: 15.03.2021

PRINCIPAL

Academic Co-ordinator: Jayashree Sharma 15/3/21

VICE PRINCIPAL 15/3/2021

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SYLLABUS PLANNER FOR THE ACADEMIC YEAR 2021-2022 | TERM: SECOND TERM | TEACHER'S NAME: MR. ARNAB PAUL CHOWDHURY

NO. OF WORKING DAYS: 44 | SUBJECT: CHEMISTRY | CLASS: 11 | SECTION: A1 & A2

MONTH	LESSONS	TOPICS COVERED	HOMEWORK	CLASS WORK
OCTOBER	Ionic Equilibria	Concept of ionic equilibrium, theory of acids and bases, pH scale, Buffer solution, Common ion effect, Theory of indicators, salt hydrolysis, Solubility Product.	Numerical, reasoning based questions and MCQ would be given as homework.(Question pattern in accordance to WBCHSE)	Numerical and conceptual question-answer, analytical questions based on WBCHSE pattern. (Ref: Test papers and previous years WBCHSE question papers)
NOVEMBER	General Organic Chemistry(GOC),Isolation and principle of estimation of organic compounds and Isomerism(Structural and Stereo chemical)	IUPAC nomenclature, Isomerism related to Organic chemistry, Electronic effects, stability order among reactive intermediates, Organic qualitative and quantitative analysis.	Problems based on IUPAC nomenclature, solving MCQ and conceptual reasoning based question answers based on electronic effects.	Solving conceptual question-answer, analytical questions on electronic effects, isomerism based on WBCHSE pattern. (Ref: Test papers and previous years WBCHSE question papers)
DECEMBER	S-Block elements-Block elements(Groups: 13,14), Hydrogen	General group trends, relativities of oxide, chloride, nitrates and sulphates of s- block elements, Special emphasis on Inert pair effect and Fajan's rule, allotropy, chemical study on Hydrogen peroxide, Water, hardness of water, strength of hydrogen peroxide and thorough group study of P-block elements(Group number 13/14).	Problems based on comparative study of group properties, solving MCQ and conceptual reasoning based question answers based on hydrocarbons, numerical from hardness of water and strength of hydrogen peroxide.	Solving conceptual question-answer, organic conversions, analytical questions on electronic effects, isomerism based on WBCHSE pattern. (Ref: Test papers and previous years WBCHSE question papers)

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Signature of the Teacher: A Chowdhury.. 15.03.2021

Submitted on: 15.03.2021

PRINCIPAL

Academic Co-ordinator: Jayashree Sharma 15/3/21

VICE PRINCIPAL 15/3/2021

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SYLLABUS PLANNER FOR THE ACADEMIC YEAR 2021-2022 | **TERM: SECOND TERM** | **TEACHER'S NAME: MR. ARNAB PAUL CHOWDHURY**

NO. OF WORKING DAYS: 28 | **SUBJECT: CHEMISTRY** | **CLASS: 11** | **SECTION: A1 & A2**

MONTH	LESSONS	TOPICS COVERED	HOMEWORK	CLASS WORK
JANUARY	Hydrocarbon(Continue) and Environmental Chemistry NOTE: The entire syllabus is completed	Basic idea of hydrocarbons, synthesis, physical properties and chemical reactions of alkane, alkene and alkyne. Aromaticity and chemistry of benzene, its preparations, properties and chemical equations, special emphasis on different types of Aromatic electrophilic substitution reactions. Primary and secondary pollutants, Greenhouse effect, Global warming, Photochemical smog and Los-Angeles smog, Water pollution, Eutrophication	Problems based on hydrocarbons, solving MCQ and conceptual reasoning based question answers based on hydrocarbons.	Solving conceptual question-answer, organic conversions, analytical questions on electronic effects, isomerism based on WBCHSE pattern. (Ref: Test papers and previous years WBCHSE question papers)
FEBRUARY	REVISION FOR THE SECOND TERM EXAMINATION 2ND TERM EXAMINATION STARTS FROM 17TH FEBRUARY SYLLABUS: THE TOPICS COVERED UP TO JANUARY 2022	Revision(Discussion of model question-answer, previous years' question papers)	Revision(Discussion of model question-answer, previous years' question papers)	Revision(Discussion of model question-answer, previous years' question papers)

Teachers are requested to prepare a LESSON PLAN for each Topic to be taught. The Lesson plans are to be submitted along with the monthly planner.

Signature of the Teacher: Apchowdhury. 15.03.2021

Submitted on: 15.03.2021

PRINCIPAL

Academic Co-ordinator: Jayatma Sherpa 15/3/21

VICE PRINCIPAL

15/3/2021