ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

FOR GOD AND COUNTRY

Syllabus Planner for the year 2018 | TERM: 1ST TERM | TEACHER`S NAME: Mr. ARNAB PAUL CHOWDHURY & Mr. SUBHAJIT BHATTACHARYA

No. of working days: 10 | No. of periods available: 5(ESTIMATED) | Subject: CHEMISTRY | CLASS: 11 | SECTION: A1 & A2

MONTH	NO. OF PERIODS	LESSONS	TOPICS COVERED	HOMEWORK	CLASS WORK
JANUARY					
FEBRUARY					
MARCH					
APRIL	05	Some Basic Concept of Chemistry	Mole concept, Introduction to Avogadro number and molar volume of gases, Gram molecular and atomic mass, Introduction to concentration terms like molarity,molality,Concept of equivalent weight,Normality.	Suitable short questions and Multiple Choice Questions (MCQ) should be given as homework to the students.	NOTE: The marks distribution of the WBHS council for a relevant chapter and the question pattern should be shared with the students for each chapter with a detailed discussion on the methodology for answering a question according to the council norms.

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.

PRINCIPAL

Submitted on.....27.01.2018.....

Signature of Teacher: .....Arnab Paul Chowdhury & Subhajit Bhattacharya.....

ACADEMIC CO-ORDINATOR

27/1/18

St. Lawrence High School

VICE PRINCIPAL

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Syllabus Planner for the year 2018 | TERM: 1ST & 2ND TERM | TEACHER`S NAME: Mr. ARNAB PAUL CHOWDHURY & Mr. SUBHAJIT BHATTACHARYA

No. of working days: 50 | No. of periods available: 39 | Subject: CHEMISTRY | CLASS: 11 | SECTION: A1 & A2

MONTH	NO. OF PERIODS	LESSONS	TOPICS COVERED	HOMEWORK	CLASS WORK
MAY	06	Some Basic Concept of Chemistry(Continue) Redox Equilibria	Eudiometry, Stoichiometric calculations,Conept of redox reactions, Equivalent weights in redox reactions, Balancing redox reactions via ion-electron and oxidation state methods.	Ample examples for balancing equations should be given as home assignment. Simple numerical on redox titrations would be given as home task.	Methodology for writing stoichiometric equations and solving mole based questions should be shared.
JUNE	10	Structure of Atom and Periodic Table	Rutherfords atomic model and the rectifications introduced by N.Bohr,Quantisation concept, Sommerfeld modification of Bohr model,Photoelectric effect,Wave-particle dualism,de Broglie and Heisenberg theory, , Concept of quantum numbers, Writing electronic configurations,Scrodinger equation(elementary idea). Development of the periodic table and basic periodic properties like ionisation potential, electron affinity, covalent and Van der Waal radius, electronegetivity etc.	Conceptual short questions and numerical based on de Broglie equation and Heisenberg rule should be given. Assignments related to arranging of periodic properties in order should be given.	Calculation involving electronic energy , Number of spectral lines, Arranging orbits in energy order should be done. Graphical analysis of periodic properties must be taught to the students.
JULY	14	Chemical Bonding, Chemical Equilibria and Ionic Equilibria	Basic covalent bonding theories like Kossel-Lewis,Valance bond and Molecular orbital theory; Concept of hybridisation, Ionic bond and lattice energy, Born Lande equation, Fajans rule, Concept of dipole moment, Hydrogen bonding. Concept of chemical equilibrium in terms of rate of forward and reverse reactions , algebraic properties of equilibrium constant, Eqm. constant in terms of concentration and Pressure,Le Chateliar Rule, Ostwald dilution law,Concept of pH,Buffer solutions, Salt hydrolysis, Concept of solubility product and common ion effect.	Numericals related to determination of bond order, finding hybridisation, calculating equilibrium constants for two reactions jumbled up, conceptual questions on solubility suppression should be given as assignment.	Examples of elucidation of molecular structure, checking the existence of dipole moment,applications of dipole moment should be done. Numericals involving pH calculation of single acids and bases, mixture of two acids and acids-bases, solubility of sparingly soluble salts should be done. NOTE : First term begins from 25.07.2018 and ends on 08.08.2018. Syllabus as done uptil July 2018.
AUGUST	09	States of Matter and Thermodynamics	Gas laws (Boyle's law, Charle's law, Dalton's law, Graham's law),Numericals based on gas laws, Ideal gas equation, Real gases,Van der Waals equation,Concept of Critical constants. Basic definitions used in thermodynamics,Concept of work, Isothermal and adiabatic work,First law of thermodynamics, Enthalpy of reaction, Hess's Law, Enthalpy of neutralisation and atomisation, Second law and entropy,Gibbs free energy and spontaneity of a process.	Numericals related to Hess's law, compressibility factor, order of Van der Waals constants a and b should be given as assignment.	Major stress should be given on solving problems related to gas laws, isothermal work, determination of standard heat of formation for complex molecules, Entropy changes during physical processes, Gibbs free energy changes during a reaction.

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ACADEMIC CO-ORDINATOR

27/1/18

St. Lawrence High School

VICE PRINCIPAL

Submitted on: 27.01.2018

Signature of Teacher: Mr. Subhajit Bhattacharya

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Syllabus Planner for the year 2018 | TERM: PRE-SELCTION | TEACHER`S NAME: Mr. ARNAB PAUL CHOWDHURY & Mr. SUBHAJIT BHATTACHARYA

No. of working days: 92 | No. of periods available: 40 | Subject: CHEMISTRY | CLASS: 11 | SECTION: A1 & A2

MONTH	NO. OF PERIODS	LESSONS	TOPICS COVERED	HOMEWORK	CLASS WORK
SEPTEMBER	12	General Organic Chemistry(GOC) and Isomerism(Structural and Stereo chemical)	IUPAC nomenclature, Isomerism in organic compounds, Electronic movements in organic molecules, Reaction intermediates and their stability, Organic qualitative and quantitative analysis.	Sufficient number of examples on IUPAC nomenclature, MCQ on intermediate stability should be given.	Examples of drawing bond line structure,naming molecules with polyfunctional groups, ascertaining the stability of carbocations, carbanions and radicals should be done.Conceptual questions on intermediate stability and acidic/basic strengths should be discussed.
OCTOBER	09	S-Block elements and P- Block elements, Hydrogen and Hydrocarbon	General group trends , reactivities of oxides,chloride,nitrates,sulphates of s-block elements, Inert pair effect, Extraction of sodium, Diborane , Borazine, Inorganic graphite, Boric acid , Borax, Silicones, Silicates, Allotropes of carbon, Hydrogen allotropes, Chemistry of hydrides, Nascent hydrogen, Hardness of water and its removal, Hydrogen peroxide. Synthesis of alkanes.	Important logical questions and MCQ must ge provided for home assignment.	Students should be made aware of all the important structures of molecules and concept based questions on water solubility, basic strength etc. Reasoning type questions should be discussed.
NOVEMBER	10	Hydrocarbon(Continue) and Environmental Chemistry	Physical and chemical properties of alkanes, synthesis,physical and chemical properties of alkenes and alkynes, Benzene and aromaticity, Electrophilic substitution in benzene. Primary and secondary pollutants, Green house effect,Global warming, Photochemical and Los Angeles smog,Water pollution, Eutrophication.	Important logical questions and MCQ must ge provided for home assignment.	Important conversion strategies and mechanistic principles must be taught such as the mechanism and exceptions to Markownikoffs rule, generation of the various electrophiles in the chemistry of benzene,hydroboration-oxidation etc.
DECEMBER	09	Revision	Entire Syllabus	Short answer questions and MCQ may be given on WBHS class 11 syllabus.	Discussion of the total marking scheme of WBHS council and discussion of model question and answers alongwith suitable MCQ.Surprise tests on overall class 11 syllabus may be taken.

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Syllabus Planner for the year 2018 | TERM: PRE-SELCTION | TEACHER`S NAME: Mr. ARNAB PAUL CHOWDHURY & Mr. SUBHAJIT BHATTACHARYA

No. of working days: 16 | No. of periods available: 05 | Subject: CHEMISTRY | CLASS: 11 | SECTION: A1 & A2

MONTH	NO. OF PERIODS	LESSONS	TOPICS COVERED	HOMEWORK	CLASS WORK
JANUARY	05	REVISION	ENTIRE SYLLABUS	Short answer questions and MCQ may be given on WBHS class 11 syllabus.	Discussion of the total marking scheme of WBHS council and discussion of model question and answers alongwith suitable MCQ.Surprise tests on overall class 11 syllabus may be taken.
FEBRUARY					
MARCH					
APRIL					

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ACADEMIC CO- ORDINATOR
27/1/18
St. Lawrence High School

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