



FOR GOD AND COUNTRY

ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION



SYLLABUS PLANNER FOR THE ACADEMIC YEAR 2021-2022

TERM: PRE-SELECTION

TEACHER'S NAME: MR. ARNAB PAUL CHOWDHURY

NO. OF WORKING DAYS: 49

SUBJECT: CHEMISTRY

CLASS: 12

SECTION: A1 & A2

MONTH	LESSONS	TOPICS COVERED	HOMEWORK	CLASS WORK
JULY	Haloalkane, Haloarene, Alcohol, Phenol and Ether, Chemical Kinetics	A) Synthesis of halo alkane, halo arene, phenol and ether; properties of them and different chemical reactions, identification tests, distinguishing methods, conceptual Council based questions would be discussed thoroughly. B) Measurement of reaction rate, Law of mass action, experimental rate law, Order and molecularity, integrated rate expression for zero, 1 st , 2 nd and n th order reactions, variation of reaction rate with temperature, Arrhenius equation.	A) WBCHSE level conversions, mechanism based problems would be given for homework. The Council based project would be given to the students before the summer vacation. Proper guidance would be shared in detail. B) 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. Conversions, Numericals & Road map problems and conceptual mechanism based questions would be solved. (Ref: Test papers and previous years WBCHSE question papers) B)
AUGUST	Electrochemistry, Solution, Aldehyde, Ketone	A) Electrolysis and Faraday's law, Concept of electrode potential and Nernst equation, commercial cell, Concept of equivalent and molar conductance and their variations with concentration, Kohlrausch's law and determination of dissociation constants of weak acids. B) Solution chapter would be discussed with numerical, graphical explanation and conceptual question-answer. C) Synthesis, Physical properties, Chemical reactions and identification tests for carbonyl compounds	WBCHSE level conversions, mechanism based problems would be given for homework assignment.	A) Problems on conductance measurement, determination of electrolysis products, calculation of cell potential based questions, numerical based of Faraday's Law would be discussed in accordance to WBCHSE. (Ref: Test papers and previous years WBCHSE question papers). B) The marks distribution of the WBCHSE council for the relevant chapter and model question-answer would be discussed. Conversions, Road map problems and conceptual mechanism based questions would be solved. (Ref: Test papers and previous years WBCHSE question papers)
SEPTEMBER	P-Block elements, d and f Block elements & Revision for First TERM First Term examination starts from 16 th SEPTEMBER' 2021 <u>Syllabus: The topics covered up to SEPTEMBER</u> <u>NOTE: PROJECT ASSIGNMENT WILL BE GIVEN BY 6TH SEPTEMBER, 2021</u>	A) A comparative study based on inorganic group chemistry of group number 15/16/17/18 would be discussed along with structures, special features and conceptual questions would be discussed. B) A comparative study based on d and f block elements would be discussed thoroughly along with emphasis on special important topics.	WBCHSE level question-answer, group analysis, discussion of conceptual aspects and solving MCQ. <u>NOTE: PROJECT ASSIGNMENT WILL BE GIVEN BY 6TH SEPTEMBER, 2021</u>	The marks distribution of the WBCHSE council for the relevant chapter and model question-answer would be discussed. Conversions, Road map problems and conceptual mechanism based questions would be solved. (Ref: Test papers and previous years WBCHSE 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:

 15.03.2021

Submitted on: 15.03.2021

PRINCIPAL

Academic Co-ordinator:

 15/3/21

VICE PRINCIPAL

 15/3/2021



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SYLLABUS PLANNER FOR THE ACADEMIC YEAR 2021-2022

TERM: PRE-SELECTION

TEACHER'S NAME: MR. ARNAB PAUL CHOWDHURY

NO. OF WORKING DAYS: 44

SUBJECT: CHEMISTRY

CLASS: 12

SECTION: A1 & A2

MONTH	LESSONS	TOPICS COVERED	HOMEWORK	CLASS WORK
OCTOBER	Carboxylic acid and Amines NOTE: THE LAST DATE FOR SUBMISSION OF WBCHSE LAB BASED SUBJECT CHEMISTRY PROJECT BY 28TH OCTOBER, 2021	Synthesis, Physical properties, Chemical reactions and identification tests for carboxylic acid and Amines	WBCHSE level conversions, mechanism based problems would be given for homework assignment. NOTE: THE LAST DATE FOR SUBMISSION OF WBCHSE LAB BASED SUBJECT CHEMISTRY PROJECT BY 28TH OCTOBER, 2021	The marks distribution of the WBCHSE council for the relevant chapter and model question-answer would be discussed. Conversions, Road map problems and conceptual mechanism based questions would be solved. (Ref: Test papers and previous years WBCHSE question papers)
NOVEMBER	Solid State and Coordination Compounds	A) Introduction to unit cell, Bravais lattice, different types of cells, Packing fraction for simple cubic cell, FCC, BCC, HCP, density calculation, crystal defects, Radius ratio, magnetic properties would be discussed. Coordination chemistry would be discussed with emphasis on all topics related to it. B) Conceptual question-answer based on unit cell formula calculation, density, void calculation, crystal defects would be discussed. Important structures, Werner's theory, VBT, Isomerism, IUPAC nomenclature, metal carbonyl compounds based of coordination compounds would be discussed.	Numerical, reasoning based questions and MCQ would be given as homework. (Question pattern in accordance to WBCHSE)	The marks distribution of the WBCHSE council for the relevant chapter and model question-answer would be discussed. Conversions, identification tests, Road map problems and conceptual mechanism based questions would be solved. (Ref: Test papers and previous years WBCHSE question papers)
DECEMBER	Biomolecules and Surface Chemistry	A) Structures, nature and important chemical reactions (Ref: Isoelectric pH, Zwitterion, Mutarotation, Inversion of cane sugar, peptide linkage, formula and structure of essential amino acids etc.) of Carbohydrate and amino acids. Special properties of Vitamins, Enzyme, Nucleic acids along with structural orientation. B) Discussion on Adsorption, Colloids, Enzyme, Solution, Peptisation, Coagulation, Gold number, Hardy and Schulz rule etc.	Reasoning based questions, flowchart, chemical reactions involved and MCQ would be given as homework. (Question pattern in accordance to WBCHSE)	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)

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Signature of the Teacher:

Arnab Paul Chowdhury 15.03.2021

Submitted on: 15.03.2021

PRINCIPAL

Academic Co-ordinator:

Jayashree Sharma 15/3/21

VICE PRINCIPAL

Arnab Paul Chowdhury
15/3/2021



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SYLLABUS PLANNER FOR THE ACADEMIC YEAR 2021-2022

TERM: PRE-SELECTION

TEACHER'S NAME: MR. ARNAB PAUL CHOWDHURY

NO. OF WORKING DAYS: 28

SUBJECT: CHEMISTRY

CLASS: 12

SECTION: A1 & A2

MONTH	LESSONS	TOPICS COVERED	HOMEWORK	CLASS WORK
JANUARY	<p>Polymers, General principle for the extraction of metals and their properties and Chemistry in everyday life</p> <p>NOTE: The entire syllabus is completed</p>	<p>A) Classification of polymers based on source, structure and the nature of intermolecular forces; monomeric units and polymeric structures of Nylon family, Polyester resins, Rubbers and polyolefin.</p> <p>B) Minerals, ores, extraction, purification and refining processes involved in metallurgy, Metallurgical study of Cu/Ag/Au/ Al/Fe/Zn. Special topics on metallurgy.</p> <p>C) Name and structures of common antibiotics, analgesics, tranquilisers, artificial sweeteners, food preservatives, anti-oxidants, soaps, disinfectants and antiseptics etc. and their application in our day to day life.</p>	Reasoning based questions, flowchart, chemical reactions involved and MCQ would be given as homework.(Question pattern in accordance to WBCHSE)	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)
FEBRUARY	<p>Revision for the second term examination</p> <p>Second Term examination starts from <u>17th FEBRUARY' 2022</u></p> <p>Syllabus: The complete syllabus according to WBCHSE.</p>	Revision of all three parts namely Physical, Inorganic and Organic Chemistry	Reasoning based questions, flowchart, chemical reactions involved and MCQ would be given as homework.(Question pattern in accordance to WBCHSE) NOTE: Revision of the entire syllabus in accordance to WBCHSE for the selection examination.	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)

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Signature of the Teacher:

Arnab Paul Chowdhury 15.03.2021

Submitted on: 15.03.2021

PRINCIPAL

Academic Co-ordinator:

Jayashree Shetty 15/3/21

VICE PRINCIPAL

Arnab Paul Chowdhury
15/3/2021