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FOR GOA CLASS 11 PREPARATION

Goa Board Class 11 Sample Paper 2027 Chemistry

EXAM	YEAR	TYPE	SUBJECT
Goa Class 11	2027	Sample Paper	Chemistry

CHEMISTRY XI

(2026-2027)

REVISED SYLLABUS

Unit: Some Basic Concepts of Chemistry	**(12 Periods)**
General Introduction: Importance and scope of Chemistry.	
Nature of matter, laws of chemical combination, Dalton's atomic theory: concept of elements, atoms and molecules.	
Atomic and molecular masses, mole concept and molar mass, percentage composition, empirical and molecular formula, chemical reactions, stoichiometry and calculations based on stoichiometry (including limiting reagent, mass percentage, molarity, molality and mole fraction).	
Unit: Structure of Atom	**(14 Periods)**
Discovery of Electron, Proton and Neutron, atomic number, isotopes and isobars. Thomson's model and its limitations. Rutherford's model and its limitations, Development leading to Bohr's model, Bohr's model and its limitations, Quantum mechanical model of the atom, concept of shells and subshells, dual nature of matter and light, de Broglie's relationship, Heisenberg uncertainty principle, concept of orbitals, quantum numbers, shapes of s, p and d orbitals, rules for filling electrons in orbitals - Aufbau principle, Pauli's exclusion principle and Hund's rule, electronic configuration of atoms and ions, extra stability of half-filled and completely filled orbitals.	
Unit: Classification of Elements and Periodicity in Properties	**(8 Periods)**
Significance of classification, brief history of the development of periodic table, modern periodic law and the present form of periodic table, periodic trends in properties of elements -atomic radii, ionic radii, inert gas radii, Ionization enthalpy, electron gain enthalpy, electronegativity, valency, oxidation state, anomalous properties, diagonal relationship. Names of elements from atomic number 100 to 118.	
Unit: Chemical Bonding and Molecular Structure	**(14 Periods)**
Valence electrons, ionic bond, covalent bond, bond parameters, Lewis's structure, polar character of covalent bond, covalent character of ionic bond, valence bond theory, resonance, geometry of covalent molecules, VSEPR theory, concept of hybridization, involving s, p and d orbitals and shapes of some simple molecules, molecular orbital theory of homonuclear diatomic molecules (qualitative idea only), Hydrogen bond.	
Unit: Chemical Thermodynamics	**(16 Periods)**
Concepts of System and types of systems, surroundings, work, heat, energy, extensive and intensive properties, state functions.	
First law of thermodynamics -internal energy and enthalpy, heat capacity and specific heat, measurement of ΔU and ΔH (change in internal energy and change in enthalpy), Hess's law of constant heat summation, thermochemical equations, enthalpy of bond dissociation, combustion, formation, atomization, sublimation, phase transition, ionization, solution and dilution. Second law of Thermodynamics (brief introduction), spontaneity, Introduction of entropy as a state function, Gibb's energy change for spontaneous and non- spontaneous processes, Gibbs energy change and equilibrium.	
Unit: Equilibrium	**(14 Periods)**
Equilibrium in physical and chemical processes, dynamic nature of equilibrium, law of chemical equilibrium and equilibrium constant, law of mass action, homogeneous equilibria, equilibrium constant in gaseous systems, heterogeneous equilibria, applications of equilibrium constants, relationship between equilibrium constant K, reaction quotient Q and Gibbs energy G, factors affecting equilibrium - Le Chatelier's principle, ionic equilibrium, acids, bases and salts, ionization of acids and bases, strong and weak electrolytes, degree of ionization, ionization of poly basic acids, acid strength, concept of pH, hydrolysis of salts (elementary idea), buffer solution, solubility product, common ion effect (with illustrative examples).	

Unit : Redox Reactions	**(06 Periods)**
Concept of oxidation and reduction, redox reactions, oxidation number, balancing redox reactions, in terms of loss and gain of electrons and change in oxidation number, applications of redox reactions- as the basis for titrations, electrode processes. Types of redox reactions.	
Unit : Organic Chemistry -Some Basic Principles and Techniques	**(14 Periods)**
General introduction, methods of purification, qualitative and quantitative analysis, classification and IUPAC nomenclature of organic compounds. Electronic displacements in a covalent bond: inductive effect, electrometric effect, resonance and hyper conjugation. Homolytic and heterolytic fission of a covalent bond: free radicals, carbocations, carbanions, electrophiles and nucleophiles, types of organic reactions.	
Unit: Hydrocarbons	**(12 Periods)**
Classification of Hydrocarbons	
Aliphatic Hydrocarbons:	
Alkanes - Nomenclature, isomerism, conformation (ethane only), Preparation, physical properties, chemical reactions including free radical mechanism of halogenation, combustion and pyrolysis.	
Alkenes - Nomenclature, structure of double bond (ethene), geometrical isomerism, physical properties, methods of preparation, chemical reactions: mechanism of electrophilic addition-addition of hydrogen, halogen, water, hydrogen halides (Markovnikov's addition and peroxide effect), ozonolysis, oxidation, Polymerization.	
Alkynes- Nomenclature, structure of triple bond (ethyne), physical properties, methods of preparation, chemical reactions: acidic character of alkynes, addition reaction of - hydrogen, halogens, hydrogen halides and water, polymerization.	
Aromatic Hydrocarbons:	
Introduction, IUPAC nomenclature, benzene: resonance, aromaticity, preparation of benzene, physical properties, chemical properties: mechanism of electrophilic substitution. Nitration, sulphonation, halogenation, Friedel Craft's alkylation and acylation, directive influence of functional group in monosubstituted benzene. Carcinogenicity and toxicity.	
UNIT: P- BLOCK ELEMENTS	**(10 Periods)**
Group -13 to Group 17 Elements	
General Introduction: Electronic configuration and general trends in physical and chemical properties of elements down the groups (oxidation states, atomic/ ionic radii, ionization enthalpy, electronegativity, electron gain enthalpy, reactivity towards oxygen, hydrogen, halogen and metals), anomalous behavior of the first element in each group.	
Group 18 elements: Electronic configuration, Physical properties and chemical properties (reasons for inertness to chemical reactivity)	

GOA BOARD OF SECONDARY AND HIGHER SECONDARY EDUCATION
ALTO - PORVORIM - GOA.

CLASS: XI SUBJECT: CHEMISTRY

SCHEME OF EXAMINATION AND MARKS DISTRIBUTION (2026-27)		
WEIGHTAGE TO OBJECTIVE	KNOWLEDGE	30% ±5%
	UNDERSTANDING	40%±5%
	SKILL	10%+5%
	APPLICATION	20%±5%

EXAMINATIONS		MID TERM	FIRST TERM	SECOND TERM	INNOVATIVE TESTING& PROJECT
WEIGHTAGE TO CONTENT	SOME BASIC CONCEPTS OF CHEMISTRY	6±1	9±1		
	STRUCTURE OF ATOM	8±1	10±1		
	CLASSIFICATION OF ELEMENTS AND PERIODICITY IN PROPERTIES	6±1	8±1		
	CHEMICAL BONDING AND MOLECULAR STRUCTURE		12±1		
	THERMODYNAMICS		9±1		
	EQUILIBRIUM			14±1	
	REDOX REACTIONS			10±1	
	ORGANIC CHEMISTRY-SOME BASIC PRINCIPLES & TECHNIQUES		12±1		
	HYDROCARBONS			14±1	
	p-BLOCK ELEMENTS			10±1	
	CORE CONTENT			12±1	
	TOTAL	20	60	60	20

WEIGHTAGE TO TYPE OF QUESTIONS FOR MID TERM EXAMINATION	TYPES OF QUESTIONS	NO OF QUESTIONS	MARKS
	MULTIPLE CHOICE QUESTION (MCQ) --- 1MARK	02	02
	VERY SHORT ANSWER (VSA)-- 1MARK	02	02
	SHORT ANSWER I (SA I)--2MARKS	05	10
	SHORT ANSWER I (SA II)-- 3MARKS	02*	06

*INTERNAL CHOICE FOR ANY ONE OF THE 03 MARKS QUESTION.

DIFFICULTY LEVEL	EASY:-30% ±5%	AVERAGE:-50% ±5%	DIFFICULT :-20% ±5%

PRACTICALS

CONTENT	FIRST TERM	SECOND-TERM
VOLUMETRIC ANALYSIS	12	8
NATURAL ORGANIC COMPOUND	4	-------
INORGANIC COMPOUND	-----	10
JOURNAL + VIVA	2+2	2
MAXIMUM MARKS	20	20
DURATION IN MINUTES	120	150

GOA BOARD OF SECONDARY AND HIGHER SECONDARY EDUCATIONALTO - PORVORIM, GOA.

MODEL BLUEPRINT OF MID TERM EXAM (2026-2027)

STD : XI SCIENCE SUBJECT : CHEMISTRY MARKS : 20 DURATION : 60min

	OBJECTIVES				DIFFICULTY LEVEL		
	K	U	S	A	Easy (E)	Average (Av)	Difficult (D)
Percentage	20%	50%	10%	20%	30%	50%	20%
Marks	4	10	2	4	6	10	4

Variation of ± 5 % is permitted in the above Objectives and Difficulty Level

Type of questions	Marks	Number of questions	Total marks
MCQ	1	2	2
VSA	1	2	2
SA-I	2	5	10
SA -2	3	2	6
Total	.....	11	20

BLUEPRINT OF MID TERM EXAM (2026 - 2027)

Q. No.	Type	NAME OF THE UNIT	Objectives	Difficulty level	Duration (min)	Marks
1.	MCQ	Some basic Concepts of chemistry	U	E	3	1
2.	MCQ	Structure Of atom	K	Av	2	1
3.	VSA	Some basic concepts	K	E	2	1
4.	VSA	Classification of Elements &periodicity in properties	U	E	3	1
5.	SA-1	Some basic concepts of chemistry	K	Av	5	2
6.	SA-1	Some basic concepts of chemistry	A	D	6	2
7.	SA-1	Structure of atom	S	Av	6	2
8.	SA-1	2. Structure of atom	A	D	6	2
9.	SA-1	Classification of elements & periodicity in properties	U	Av	6	2
10 *	SA-2	Structure of atom	U	E	8	3
11.	SA-2	Classification of elements & periodicity in properties	U	Av	8	3
Total					55	20

***One internal choice**

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MODEL BLUEPRINT OF FIRST TERM EXAM (2026-2027)

STD : XI SCIENCE SUBJECT : CHEMISTRY MARKS : 60 DURATION : 150 min

	OBJECTIVES				DIFFICULTY LEVEL		
	K	U	S	A	Easy (E)	Average (Av)	Difficult (D)
Percentage	30%	40%	10%	20%	30%	50%	20%
Marks	18	24	6	12	18	30	12

Variation of ± 5 % is permitted in the above Objectives and Difficulty Level

Type of questions	Marks	Number of questions	Total marks
MCQ	1	8	8
VSA	1	4	4
SA – I	2	12	24
SA – II	3	4	12
LA	4	3	12
Total	.....	31	60

Choice to be provided for one question of two marks, one question of three marks and one question of 4 marks.
*(internal choice)

MCQ= Multiple Choice question
VSA = Very Short Answer
SA I =Short Answer type I
SA II = Short Answer type II
LA = Long Answer

BLUEPRINT OF FIRST TERM EXAM (2026-2027)

Q. No.	Type	Unit name	Objectives	Difficulty level	Duration (min)	Marks
1.	MCQ	THERMODYNAMICS	U	Av	1	1
2.	MCQ	ORGANIC CHEMISTRY-SOME BASIC PRINCIPLES & TECHNIQUES	A	D	2	1
3.	MCQ	CLASSIFICATION OF ELEMENTS AND PERIODICITY OF PROPERTIES	U	Av	2	1

4.	MCQ	CHEMICAL BONDING AND MOLECULAR STRUCTURE	U	Av	2	1
5.	MCQ	STRUCTURE OF ATOM	A	D	3	1
6.	MCQ	SOME BASIC CONCEPTS OF CHEMISTRY	U	Av	1	1
7.	MCQ	THERMODYNAMICS	K	E	1	1
8.	MCQ	SOME BASIC CONCEPTS OF CHEMISTRY	A	D	3	1
9.	VSA	ORGANIC CHEMISTRY-SOME BASIC PRINCIPLES & TECHNIQUES	A	D	3	1
10.	VSA	CHEMICAL BONDING AND MOLECULAR STRUCTURE	K	E	1	1
11.	VSA	STRUCTURE OF ATOM	U	Av	2	1
12.	VSA	CLASSIFICATION OF ELEMENTS AND PERIODICITY OF PROPERTIES	K	E	2	1
13.	SA-I	CHEMICAL BONDING AND MOLECULAR STRUCTURE	U	Av	5	2
14.	SA-I	CLASSIFICATION OF ELEMENTS AND PERIODICITY OF PROPERTIES	K	E	4	2
*15.	SA-I	THERMODYNAMICS OR	U	Av	5	2
*15.	SA-I	THERMODYNAMICS	U	Av	5	2
16.	SA-I	STRUCTURE OF ATOM	K	E	5	2
17.	SA-I	SOME BASIC CONCEPTS OF CHEMISTRY	A	D	6	2
18.	SA-I	CHEMICAL BONDING AND MOLECULAR STRUCTURE	S	Av	6	2
19.	SA-I	CLASSIFICATION OF ELEMENTS AND PERIODICITY OF PROPERTIES	U	Av	6	2
20.	SA-I	SOME BASIC CONCEPTS OF CHEMISTRY	K	E	5	2
21.	SA-I	THERMODYNAMICS	K	E	4	2
22.	SA-I	STRUCTURE OF ATOM	S	Av	6	2
23.	SA-I	CLASSIFICATION OF ELEMENTS AND PERIODICITY OF PROPERTIES	K	E	5	2
24.	SA-I	CHEMICAL BONDING AND MOLECULAR STRUCTURE	K	E	6	2
*25.	SA-II	ORGANIC CHEMISTRY- SOME BASIC PRINCIPLES & TECHNIQUES OR	A	D	8	3
*25.	SA-II	ORGANIC CHEMISTRY- SOME BASIC PRINCIPLES & TECHNIQUES	A	D	8	3
26.	SA-II	THERMODYNAMICS	K	E	5	3
27.	SA-II	SOME BASIC CONCEPTS OF CHEMISTRY	A	D	7	3
28.	SA-II	ORGANIC CHEMISTRY- SOME BASIC PRINCIPLES & TECHNIQUES	U	Av	7	3
*29.	LA	CHEMICAL BONDING AND MOLECULAR STRUCTURE	U	Av	10	4

		OR				
*29.	LA	CHEMICAL BONDING AND MOLECULAR STRUCTURE	U	Av	10	4
30.	LA	ORGANIC CHEMISTRY- SOME BASIC PRINCIPLES & TECHNIQUES	S+U	Av	9	2+2=4
31.	LA	STRUCTURE OF ATOM	U	Av	8	4
	TOTAL DURATION IN MINUTES AND MARKS				140 min	60mks

GOA BOARD OF SECONDARY AND HIGHER SECONDARY EDUCATION , ALTO-PORVORIM GOA.

SECOND TERM EXAMINATION – XI SCIENCE (2026-2027)

MODEL BLUEPRINT OF SECOND TERM EXAM

MARKS : 60 MAXIMUM NUMBER OF QUESTION : 31 DURATION :150 min

	OBJECTIVES				DIFFICULTY LEVEL		
	K	U	S	A	Easy (E)	Average(Av)	Difficult(D)
Percentage	30%	40%	10%	20%	30%	50%	20%
Marks	18	24	6	12	18	30	12

Variation of ± 5% is permitted in the above Objectives and Difficulty Level

Type of question	Marks	Number of Questions	Total marks
MCQ	1	8	8
VSA	1	4	4
SA-I	2	12	24
SA-II	3	4	12
LA	4	3	12
Total	.....	31	60

MCQ = Multiple Choice Question. VSA = Very Short Answer Type.

SA – I = Short Answer Type I.

SA – II = Short Answer Type II.

LA = Long Answer Type.

**Internal choice to be provided for one question of two marks, one question of three marks and one question of four marks.*

Internal choice to be provided for one question of two marks, one question of three marks and one question of four marks.

GOA BOARD OF SECONDARY AND HIGHER SECONDARY EDUCATION , ALTO - PORVORIM GOA.

BLUEPRINT OF MODEL QUESTION PAPER FOR SECOND TERM EXAM (2026-2027)

STD : XI Science SUBJECT : Chemistry DURATION : 150 min MARKS : 60

Q. No.	TYPE	UNIT	OBJECTIVE	DIFFICULTY LEVEL	DURATION IN MINUTES	MARKS
1	MCQ	Redox Reactions	K	E	2	1
2	MCQ	Equilibrium	K	E	2	1
3	MCQ	Equilibrium	U	Av	3	1
4	MCQ	Hydrocarbons	K	E	2	1
5	MCQ	Hydrocarbons	A	D	4	1
6	MCQ	p-block elements	K	E	2	1
7	MCQ	p-block elements	U	D	3	1
8	MCQ	Core content	K	E	1	1
9	VSA	Redox Reactions	A	D	4	1
10	VSA	Hydrocarbons	U	Av	3	1
11	VSA	p-block elements	K	E	2	1
12	VSA	Core content	K	E	2	1
13	SA-I	Equilibrium	A	D	4	2
14	SA-I	Redox Reactions	S	Av	3	2
15*	SA-I	Redox Reactions	K	E	4	2
		OR				
15*	SA-I	Redox Reactions	K	E	4	2
16	SA-I	Hydrocarbons	K	E	4	2
17	SA-I	Hydrocarbons	S	Av	3	2
18	SA-I	p-block elements	A	D	5	2
19	SA-I	p-block elements	U	Av	4	2
20	SA-I	Core content	S	Av	3	2
21	SA-I	Core content	A	D	5	2
22	SA-I	Core content	K	E	4	2
23	SA-I	Core content	K	E	4	2
24	SA-I	Core content	U	Av	4	2
25	SA-II	p-block elements	U	Av	7	3
26*	SA-II	Hydrocarbons	A	D	8	3
		OR				
26*	SA-II	Hydrocarbons	A	D	8	3
27	SA-II	Equilibrium	K	E	5	3
28	SA-II	Equilibrium	U	Av	7	3
29	LA	Redox Reactions	U + A	Av	12	4
30	LA	Hydrocarbons	U	Av	12	4
31*	LA	Equilibrium	U	Av	12	4
		OR				
31*	LA	Equilibrium	U	Av	12	4
TOTAL DURATION IN MINUTES AND TOTAL MARKS					**140 min**	**60 mks**

SEAT NO:- TABLE NO:-

Goa Board of Secondary & Higher Secondary Education
Alto, Betim – Goa

CHEMISTRY -XI SCIENCE

First Term Practical Examination(2026-27)
MODEL QUESTION PAPER

Date: Duration: 120 Minutes
Session: Max. Marks:20

Instructions:

1) Write your Examination Seat number and laboratory table number on your answer book and question paper.
2) Get the burette reading and confirmatory tests initialed by the examiner.
3) Check if the number on (i) your table (ii) answer script and (iii) the containers A, B, and D are the same. If not, report immediately to the examiner.
4) Use of non - programmable calculator is allowed.

Atomic Masses:- H=1, C=12, N=14, O=16, Na =23, S=32, K=39.

Q.1. You are provided with two solutions as follows:-

Container A:_____N/M solution of _____.

Container B: _____x N/M_____solution of _____.

Using the above solutions, determine:

i) N/M of the solution in container **B.**

ii) Calculate the Strength of the solution in container **B,** in terms of g/____ml **(12 Marks)**

Q.2. Identify the given Natural Organic substance in container **D b**earing your table number for the presence of Carbohydrate/Fat or Oil/Protein and report the test that is positive. **(04 Marks)**

Q.3. Journal + Viva (2+2 Mark) **(04 Marks)**

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Marking Scheme for First Term Practical Examination-2026-27

Q 1) Volumetric Analysis (Acid -base titration):..... (12 Marks)

i) Observations : (Burette, pipette/ conical flask, indicator, color change) (2 Marks)

ii) Reading (6 Marks)

± 0.2 ..... 6mks
± 0.3 ..... 5 mks
± 0.4 ..... 4mks
± 0.5 ..... 3 mks
± 0.6 ..... 2 mks
± 0.7 ..... 1 mk

iii) Calculations: (4 Marks)

1. Determination of N/M of Solution B/A..... 2 mk
2. Strength of the solution in container **B/A,** in terms of g/____ml..... 2 mk

Q2. Identification and correct reporting of the given Natural Organic substance ..... **(04 Marks)**

Q3. Journal + Viva.....2+2= **(4 Marks)**

SEAT NO:- TABLE NO:-

Goa Board of Secondary & Higher Secondary Education
Alto, Betim – Goa

CHEMISTRY -XI SCIENCE

Second Term Practical Examination(2026-27)
MODEL QUESTION PAPER

Date: Duration: 150 Minutes
Session: Max. Marks:20

Instructions:

1) Write your Examination Seat number and laboratory table number on your answer book and question paper.

2) Get the burette reading and confirmatory tests initialed by the examiner.

3) Check if the number on (i) your table (ii) answer script and (iii) the containers A, B, and D are the same. If not, report immediately to the examiner.

4) Use of non - programmable calculator is allowed.

Atomic Masses:- H=1, C=12, N=14, O=16, Na =23, S=32, K=39.

Q.1. You are provided with two solutions as follows:-
Container A:_____g /_____mL solution of _____.
Container B: Impure solution of _____

Using the above solutions, determine:

i) N/M of the solution in container **B.**
ii) Calculate the percentage purity of the solution in container **B, _____g** of which have been dissolved per **_____mL.** **(08 Marks)**

Q.2. Analyse the inorganic salt given in container **D** bearing your table number qualitatively and detect the cation and anion present. Give a complete report of all the tests performed. Write the formula of the Compound detected. **(10 Marks)**

Q.3. Journal **(2 Marks)**

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CHEMISTRY -XI SCIENCE

Marking Scheme for Second Term Practical Examination

Q 1) Volumetric Analysis (Acid-base titration): (08 Marks)

i) Observations : (Burette, pipette/ conical flask, indicator, color change) (1Mark)

ii) Equation ..... (1Mark)

iii) Reading (3 Marks)

± 0.2 ..... 3mks

± 0.3 ..... 2 ½ mks

± 0.4.....2mks

± 0.5 ..... 1 ½ mks

± 0.6 ..... 1mk

iv) Calculations: (3 Marks)

Conversion of g/ V mL to M/N of Solution A.....1 mk

Determination of N/M of Solution B..... 1 mk

Percentage purity of Solution B..... 1 mk

Q2.Inorganic Qualitative analysis (10 Marks)

1) Preliminary test /Dry test…… ½ x 8 = 4 mks

2) Wet test for anion: Correct anion .....(1 mk)

C.T.....(1mk)

3) Wet test for cation: Correct group…..... (1mk)

Correct cation ..... (1 mk)

C.T.....(1 mk)

4) Correct formula .....(1 mk)

Q3. Journal (2 Marks)

GUIDELINES FOR CONDUCT OF THE XI-PRACTICALS IN CHEMISTRY -2026-27

1 .Student should report:

(a) Minimum of 4 volumetric exercises.(Acid base titrations)

(b) Minimum of 10 inorganic qualitative analysis.(Same list of salts as given for STD-XII)

(c) Four physical experiments(to be evaluated for viva only)

i. Crystallization of Copper sulphate
ii. Determination of Boiling & Melting point of two separate organic compounds.
iii. Study the shift in equilibrium between ferric ions and thiocyanate ions by increasing /decreasing the concentration of either of the ions/ Study the shift in equilibrium between $[Co(H_2O)_6]^{2+}$ and chloride ions by changing the concentration of either of the ions.
iv. Determination of pH of some solutions obtained from fruit juices, solutions of known and varied concentrations of acids, bases and salts using pH paper and/or universal indicator

(d) Identification of Natural organic substances

Note:

I. *Except for fat/oil aqueous solution or suspension of food items containing natural organic substance to be given and not the direct natural organic substance.*
II. *Any one of the positive test to be reported*

2. Innovative test = 10 Marks

3. Project *=10 Marks

Project* **(Periods 10)**

Scientific investigations involving laboratory testing and collecting information from other sources.

A few suggested projects

- Checking the bacterial contamination in drinking water by testing sulphide ions.
- Study of the methods of purification of water.
- Testing the hardness, presence of iron, fluoride, chloride etc. depending upon the regional variation in drinking water and the study of causes of presences of these ions above permissible limit (if any)
- Investigation of the foaming capacity of different washing soaps and the effect of addition of sodium carbonate on them.
- Study of the acidity of different samples of the tea leaves.
- Determination of the rate of evaporation of different liquids.
- Study of the effect of acids and bases on the tensile strength of fibers.
- Analysis of fruit and vegetable juices for their acidity.

Note: *Any other investigatory project, which involves about 10 periods of work, can be chosen with the approval of the teacher.*

**** Project work may be performed individually or in a group of maximum 4 students**

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