

**S R Tangri DAV Public School Bilga**  
**SYLLABUS of Class XI - ARTS Stream ( 2024-25 )**

**Subject : ENGLISH CORE (301)**

Month	Hornbill	Snapshots	Reading & Writing Skills	Grammar & Language Activities	Activity
<b>April</b>	Introduction to the CLASS XI English Core(301)Curriculum & Question paper design 1.The Portrait of a Lady (prose) 2. A Photograph (Poem)	1.The Summer of the Beautiful White Horse	1.Reading Comprehension Practice 2.Classified Advertisements	1.Gap filling (Tenses, clauses)	Draw a portrait Of your grandmother and write a paragraph about her
<b>May</b>	3. We're not Afraid to Die if We Can All be Together(prose)	2. The Address Periodic test-I	1.Notes Making and Summarizing 2. Posters	1.Re- Ordering Of Sentences	Speech on ill effects of wars
<b>July</b>	4.The Laburnum Top (Poem) 5. Discovering Tut: The Saga Continues...(prose)	1. Speech - related to some contemporary/ age appropriate topic	1. Transformation of sentences	Sketching comic Strips	
<b>August</b>	6.The Voice of the Rain (Poem) REVISION FOR HALF YEARLY EXAM	3. Mother's Day	1. Debate - related to some contemporary topical issues	1.Integrated Grammar Exercises	
<b>October</b>	7. The Adventure(prose) 8.Childhood (poem)	4. The Birth	1.Reading Comprehension Practice 2.Classified Advertisements 3.Posters Revision of Short & Long Compositions & Reading Comprehension	1.Gapfilling(Tenses, clauses) ASL Listening Activity 1 Speaking Activity 1	Prepare slide show of The Adventure
<b>November</b>	Silk Road(prose) Father to son. (poem)	The Tale Of Melon City	1.Notes Making and Summarizing Speech - related to some contemporary/ age appropriate topic 3.Debate - related to some contemporary	1.Re- Ordering Of Sentences. 1.Transformat ion of sentences	

			topical issues		
<b>December</b>	Revision	Revision	Revision	Revision Of Integrated Grammar Exercises ASL	
<b>January</b>	Revision	Revision	Revision	ASL Project Work & Viva	
<b>Feb-Mar</b>	Exams				

### Subject : PHYSICAL EDUCATION (048)

MONTH	CHAPTER	ACTIVITY
<b>April</b>	Ch-1 Changing Trends and career options in Phy. Edu Ch-2 Olympic Movement	Presentation on career options in Phy. Edu
<b>May</b>	Ch-3 Yoga Ch-4 Phy. Edu and sports for CWSN	Perform Different type of asanas related to different physical problems
<b>July</b>	Ch-5 Fitness - wellness and lifestyle	Make PPT on first Aid
<b>August</b>	Ch-6 Test and Measurements Ch-7 Anatomy and Physiology	Make Model on any organ system like Heart , Respiration , skeleton.
<b>October</b>	Ch-8 Biomechanics and sports Ch-9 Psychology and Sports	Presentation on different type of movements.
<b>November</b>	Ch-10 Training and Doping in sports	

### Subject : HISTORY (027)

MONTH	LESSONS TO BE COVERED
<b>April</b>	Ch- 1 Writing and City Life Ch- 2 An Empire Across Three Continents
<b>May</b>	Ch-3 Nomadic Empire
<b>June</b>	Summer Vacation
<b>July</b>	Ch-4 The Three Orders
<b>August</b>	Ch- 5 Changing Cultural Tradition Ch- 6 Displacing Indigenous People
<b>September</b>	Half Yearly Examination
<b>October</b>	Ch- 7 Paths to Modernization
<b>November</b>	Board Exams
<b>December-February</b>	Revision of Full Syllabus

## Subject : POLITICAL SCIENCE (028)

<b>MONTH</b>	<b>LESSONS TO BE COVERED</b>
<b>April</b>	Part- A Ch- 1 Constitution: Why and How? Ch- 2 Rights in the Indian Constitution. Ch- 3 Election and Representation
<b>May</b>	Part-A Ch- 4 Executive Ch- 5 Legislature Ch- 6 Judiciary Ch- 7 Federalism
<b>June</b>	Summer Vacation
<b>July</b>	Part- A Ch- 8 Local Government Ch-9 Constitution as a Living Document Ch- 10 The Philosophy of the Constitution  Part- B Ch- 1 Political Theory: An Introduction
<b>August</b>	Part-B Ch- 2 Freedom Ch- 3 Equality Ch- 4 Social justice Ch- 5 Rights
<b>September</b>	Half Yearly Examination
<b>October</b>	Part-B Ch- 6 Citizenship Ch-7 Nationalism Ch- 8 Secularism
<b>November- February</b>	Revision of full syllabus

### **Subject : HINDUSTANI MUSIC VOCAL (034)**

<b>MONTH</b>	<b>TOPICS</b>
<b>April-May</b>	Defination of Nada, Swara, Saptak, Brief study of Margi Sangeet, Dharupad, Teen tala, Introduction of raga Bihag
<b>June –July</b>	Definition ofSharuti, Thaata, Jati, Brief study of Desi sangeet, Khyal, Life sketch of V.D Paluskar, Notation raga Bihag, Ek tala
<b>Aug-Sep</b>	Definition of Laya, Tala,Raga, Life sketch of Tansen, raga Bhimplasi, Chautala
<b>Oct-Nov</b>	Life sketch of VN Bhatkhande,Knowledge of the structure of Tanpura,Raga Bhairvi

### **Subject : PAINTING (049)**

<b>MONTH</b>	<b>TOPICS</b>
<b>April-May</b>	Unit I - 1. Pre-historic Rock painting 2. Art of Indus Valley Civilisation
<b>July - Aug</b>	Buddhist , Jain & Hindu Art Unit II - 3. General Introduction of Art during Mauryan, Shunga, Kushana & Gupta Period 4. Art of Ajanta
<b>Sep - Oct - Nov</b>	Temple sculptures, Bronze & Indo-Islamic architecture Unit III- 5. Indian Temple sculpture 6. Indian Bronze architecture 7. Indo-Islamic architecture

### **Subject : PUNJABI (104)**



### **Subject : BANKING (811)**



**S R Tangri DAV Public School Bilga**  
**SYLLABUS of Class XI - COMMERCE Stream ( 2024-25 )**

**Subject : ENGLISH CORE (301)**

Month	Hornbill	Snapshots	Reading & Writing Skills	Grammar & Language Activities	Activity
<b>April</b>	Introduction to the CLASS XI English Core(301)Curriculum & Question paper design 1.The Portrait of a Lady (prose) 2. A Photograph (Poem)	1.The Summer of the Beautiful White Horse	1.Reading Comprehension Practice 2.Classified Advertisements	1.Gap filling (Tenses, clauses)	Draw a portrait Of your grandmother and write a paragraph about her
<b>May</b>	3. We're not Afraid to Die if We Can All be Together(prose)	2. The Address Periodic test-I	1.Notes Making and Summarizing 2. Posters	1.Re- Ordering Of Sentences	Speech on ill effects of wars
<b>July</b>	4.The Laburnum Top (Poem) 5. Discovering Tut: The Saga Continues...(prose)	1. Speech - related to some contemporary/ age appropriate topic	1. Transformation of sentences	Sketching comic Strips	
<b>August</b>	6.The Voice of the Rain (Poem) REVISION FOR HALF YEARLY EXAM	3. Mother's Day	1. Debate - related to some contemporary topical issues	1.Integrated Grammar Exercises	
<b>October</b>	7. The Adventure(prose) 8.Childhood (poem)	4. The Birth	1.Reading Comprehension Practice 2.Classified Advertisements 3.Posters Revision of Short & Long Compositions & Reading Comprehension	1.Gapfilling(Tenses, clauses) ASL Listening Activity 1 Speaking Activity 1	Prepare slide show of The Adventure
<b>November</b>	Silk Road(prose) Father to son. (poem)	The Tale Of Melon City	1.Notes Making and Summarizing Speech - related to some contemporary/ age appropriate topic 3.Debate - related to some contemporary	1.Re- Ordering Of Sentences. 1.Transformat ion of sentences	

			topical issues		
<b>December</b>	Revision	Revision	Revision	Revision Of Integrated Grammar Exercises ASL	
<b>January</b>	Revision	Revision	Revision	ASL Project Work & Viva	
<b>Feb-Mar</b>	Exams				

### Subject : PHYSICAL EDUCATION (048)

MONTH	CHAPTER	ACTIVITY
April	Ch-1 Changing Trends and career options in Phy. Edu Ch-2 Olympic Movement	Presentation on career options in Phy. Edu
May	Ch-3 Yoga Ch-4 Phy. Edu and sports for CWSN	Perform Different type of asanas related to different physical problems
July	Ch-5 Fitness - wellness and lifestyle	Make PPT on first Aid
August	Ch-6 Test and Measurements Ch-7 Anatomy and Physiology	Make Model on any organ system like Heart , Respiration , skeleton.
October	Ch-8 Biomechanics and sports Ch-9 Psychology and Sports	Presentation on different type of movements.
November	Ch-10 Training and Doping in sports	

### Subject : ECONOMICS (030)

MONTH	UNIT AND CONTENT	ACTIVITY
<b>APRIL</b>	<p><b>Unit 4: Introduction Of Micro Economics</b></p> <ul style="list-style-type: none"> <li>• Meaning of microeconomics and macroeconomics; positive and normative economics What is an economy?</li> <li>• Central problems of an economy: what, how and for whom to produce;</li> <li>• Concepts of Production Possibility Frontier and Opportunity Cost.</li> </ul> <p><b>Unit 5: Consumer's Equilibrium</b></p> <ul style="list-style-type: none"> <li>• Consumer's equilibrium - meaning of Utility, Marginal Utility, Law of Diminishing Marginal Utility, conditions of consumer's equilibrium using marginal utility analysis.</li> <li>• Indifference curve analysis of consumer's equilibrium-the consumer's budget (budget set and budget line), preferences of the consumer (indifference curve, indifference map) and conditions of consumer's equilibrium.</li> </ul> <p><b>Unit 1: Introduction of Statistics</b></p> <ul style="list-style-type: none"> <li>• What is Economics? Meaning, scope, functions and importance of statistics in Economics</li> </ul>	Role play (Water or Fruit Activity)
<b>MAY</b>	<p><b>Unit 2: Collection, Organisation and Presentation of data</b></p> <ul style="list-style-type: none"> <li>• Collection of data - sources of data - primary and secondary; how basic</li> </ul>	Frame questionnaires

	<p>data is collected with concepts of Sampling; methods of collecting data; some important sources of secondary data: Census of India and National Sample Survey Organisation</p> <ul style="list-style-type: none"> <li>• Organisation of Data: Meaning and types of variables; Frequency Distribution.</li> <li>• Presentation of Data: Tabular Presentation and Diagrammatic Presentation of Data: (i) Geometric forms (bar diagrams and pie diagrams), (ii) Frequency diagrams (histogram, polygon and Ogive) and (iii) Arithmetic line graphs (time series graph)</li> </ul>	Worksheets of different types of graphs.
<b>JULY</b>	<p><b>Unit 5: Demand (cond.)</b></p> <ul style="list-style-type: none"> <li>• Demand, market demand, determinants of demand, demand schedule, demand curve and its slope, movement along and shifts in the demand curve;</li> <li>• Price elasticity of demand - factors affecting price elasticity of demand; measurement of price elasticity of demand – percentage-change method and total expenditure method.</li> </ul> <p><b>Unit 6: Producer Behaviour and Supply</b></p> <ul style="list-style-type: none"> <li>• Meaning of Production Function – Short-Run and Long-Run Total Product, Average Product and Marginal Product. Returns to a Factor</li> </ul>	<p>Daily life examples</p> <p>Worksheet on numericals related to the topic.</p> <p>Block and shape activity</p>
<b>AUGUST</b>	<p><b>Unit 3: Statistical Tools and Interpretation</b></p> <ul style="list-style-type: none"> <li>• Measures of Central Tendency- Arithmetic mean, Median and Mode</li> </ul>	Worksheet on numericals related to the topic
<b>SEPTEMBER</b>	<b>Revision &amp; Exams</b>	
<b>OCTOBER</b>	<p><b>Unit 6: Producer Behaviour and Supply (contd.)</b></p> <ul style="list-style-type: none"> <li>• Cost – Short run costs - Total Cost, Total Fixed Cost, Total Variable Cost; Average Cost; Average Fixed Cost, Average Variable Cost and Marginal Cost - meaning and their relationships.</li> <li>• Revenue – Total Revenue, Average Revenue and Marginal Revenue - meaning and their relationship.</li> </ul> <p><b>Unit 3: Statistical Tools and Interpretation (contd.)</b></p> <ul style="list-style-type: none"> <li>• Correlation – meaning and properties, scatter diagram; measures of correlation - Karl Pearson's method (two variables ungrouped data) Spearman's rank correlation (Non-Repeated Ranks and Repeated Ranks).</li> </ul>	Worksheets on Numericals related to the topic
<b>NOVEMBER</b>	<p><b>Unit 6: Producer Behaviour and Supply (contd.)</b></p> <ul style="list-style-type: none"> <li>• Producer's Equilibrium - meaning and its conditions in terms of Marginal Revenue Marginal Cost.</li> <li>• Supply, market supply, determinants of supply, supply schedule, supply curve and its slope, movements along and shifts in supply curve, price elasticity of supply; measurement of price elasticity of supply - percentage-change method.</li> </ul> <p><b>Unit 3: Statistical Tools and Interpretation (contd.)</b></p> <ul style="list-style-type: none"> <li>• Introduction to Index Numbers - meaning, types - Wholesale Price Index, Consumer Price Index and index of industrial production, uses of index numbers; Inflation and Index Numbers, Simple Aggregative Method.</li> </ul>	Worksheet on numericals related to the topic
<b>DECEMBER</b>	<p><b>Unit 7: Perfect Competition - Price Determination and simple applications</b></p> <ul style="list-style-type: none"> <li>• Perfect competition - Features; Determination of market equilibrium and effects of shifts in demand and supply. (Short Run Only)</li> <li>• Simple Applications of Demand and Supply: Price ceiling, Price floor</li> </ul> <p><b>REVISION</b></p>	
<b>JAN &amp; FEB</b>	<b>Revision &amp; Exams</b>	

## Subject : BUSINESS STUDIES (054)

<b>April</b>	<ul style="list-style-type: none"> <li>• <b>Unit -1 Business, Trade and Commerce</b> (List of Primary, Secondary industries along with images Make a chart or PPT presentation. list of business, Profession and Employment, List of social objectives that a business can do), Mind Map, CASE Study Discussion</li> <li>• <b>Unit-2 Forms of Business Organisation, Formation of a Company</b> (Role Play: A student acts as Sole Proprietor and then partnership, Co-operative society, HUF &amp; JSC, their family occupation, they will tell about features.), Mind Map, CASE Study Discussion</li> </ul>
<b>May</b>	<p><b>Unit-2 Forms of Business Organisation</b> (Role Play: Students will acts as Sole Proprietor, partnership, Co-operative society, HUF &amp; JSC, (their family occupation), they will tell about features.) (Make a chart of comparative difference and similarities of all forms of Business organisations), Practical File as SVHA</p>
<b>July</b>	<ul style="list-style-type: none"> <li>• <b>Unit -3 Private, Public and Global Enterprises</b> (Make a PPT of Departmental, Statuary &amp; Govt. Company), Mind Map, CASE Study Discussion</li> <li>• <b>Unit-4 Business Services</b></li> </ul>
<b>August</b>	<p><b>Unit-4 Business Services</b> (List the Public Sector and Private Sector bank along with their Logos, their Share Capital, List of Service sectors and their growth from last ten years, List of Courier companies in India), Mind Map, CASE Study Discussion</p> <ul style="list-style-type: none"> <li>• <b>Unit-5 Emerging Modes of Business</b> (List of e-commerce companies, Growth of Amazon in the form of Products and sales revenue), Mind Map, CASE Study Discussion</li> </ul> <p style="text-align: center;"><b>(Trem-1 Exam Revision)</b></p>
<b>September</b>	<ul style="list-style-type: none"> <li>• <b>Unit-6 Social Responsibilities of Business and Business Ethics</b>, Mind Map, CASE Study Discussion</li> <li>• <b>Unit-7 Sources of Business Finance</b> (Make a chart on Owners fund and borrowed funds), Mind Map, CASE Study Discussion</li> </ul>
<b>October</b>	<ul style="list-style-type: none"> <li>• <b>Unit-8 Small Business Entrepreneurship</b> (Make a list of small business around you), Mind Map, CASE Study Discussion</li> <li>• <b>Unit -9 Internal Trade</b> (Make a chart on itinerants and fixed place retailers, with small explanations and keywords), Mind Map, CASE Study Discussion</li> </ul>
<b>November</b>	<ul style="list-style-type: none"> <li>• <b>Unit-10 External Trade</b> (India's trade with different countries, What are major imports and exports and their volume), Mind Map, CASE Study Discussion</li> </ul> <p>Revision &amp; Tests</p>
<b>December</b>	Revision & Tests
<b>January</b>	Revision & Tests
<b>February</b>	Revision & Tests



**Subject : ACCOUNTANCY (055)**



**Subject : HINDUSTANI MUSIC VOCAL (034)**

<b>MONTH</b>	<b>TOPICS</b>
<b>April-May</b>	Defination of Nada, Swara, Saptak, Brief study of Margi Sangeet, Dharupad, Teen tala, Introduction of raga Bihag
<b>June –July</b>	Definition ofSharuti, Thaati, Jati, Brief study of Desi sangeet, Khyal, Life sketch of V.D Paluskar, Notation raga Bihag, Ek tala
<b>Aug-Sep</b>	Definition of Laya, Tala,Raga, Life sketch of Tansen, raga Bhimplasi, Chautala
<b>Oct-Nov</b>	Life sketch of VN Bhatkhande,Knowledge of the structure of Tanpura,Raga Bhairvi

**Subject : PAINTING (049)**

<b>MONTH</b>	<b>TOPICS</b>
<b>April-May</b>	Unit I - 1. Pre-historic Rock painting 2. Art of Indus Valley Civilisation
<b>July - Aug</b>	Buddhist , Jain & Hindu Art Unit II - 3. General Introduction of Art during Mauryan, Shunga, Kushana & Gupta Period 4. Art of Ajanta
<b>Sep - Oct - Nov</b>	Temple sculptures, Bronze & Indo-Islamic architecture Unit III- 5. Indian Temple sculpture 6. Indian Bronze architecture 7. Indo-Islamic architecture

**S R Tangri DAV Public School Bilga**  
**SYLLABUS of Class XI - SCIENCE Stream ( 2024-25 )**

**Subject : ENGLISH CORE (301)**

Month	Hornbill	Snapshots	Reading & Writing Skills	Grammar & Language Activities	Activity
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<b>May</b>	3. We're not Afraid to Die if We Can All be Together(prose)	2. The Address Periodic test-I	1.Notes Making and Summarizing 2. Posters	1.Re- Ordering Of Sentences	Speech on ill effects of wars
<b>July</b>	4.The Laburnum Top (Poem) 5. Discovering Tut: The Saga Continues...(prose)	1. Speech - related to some contemporary/ age appropriate topic	1. Transformation of sentences	Sketching comic Strips	
<b>August</b>	6.The Voice of the Rain (Poem) REVISION FOR HALF YEARLY EXAM	3. Mother's Day	1. Debate - related to some contemporary topical issues	1.Integrated Grammar Exercises	
<b>October</b>	7. The Adventure(prose) 8.Childhood (poem)	4. The Birth	1.Reading Comprehension Practice 2.Classified Advertisements 3.Posters Revision of Short & Long Compositions & Reading Comprehension	1.Gapfilling(Tenses, clauses) ASL Listening Activity 1 Speaking Activity 1	Prepare slide show of The Adventure
<b>November</b>	Silk Road(prose) Father to son. (poem)	The Tale Of Melon City	1.Notes Making and Summarizing Speech - related to some contemporary/ age appropriate topic 3.Debate - related to some contemporary	1.Re- Ordering Of Sentences. 1.Transformat ion of sentences	

			topical issues		
<b>December</b>	Revision	Revision	Revision	Revision Of Integrated Grammar Exercises ASL	
<b>January</b>	Revision	Revision	Revision	ASL Project Work & Viva	
<b>Feb-Mar</b>	Exams				

## Subject : PHYSICS (042)

Month	Name of Unit and chapter
<b>April</b>	Unit-I Physical World and Measurement Chapter-2: Units and Measurements
<b>April/May</b>	Unit-II Kinematics Chapter-3: Motion in a Straight Line Chapter-4: Motion in a Plane
<b>May</b>	Unit-III Laws of Motion Chapter-5: Laws of Motion
<b>July</b>	Unit-IV Work, Energy and Power Chapter-6: Work, Energy and Power
<b>July /August</b>	Unit-V Motion of System of Particles and Rigid Body Chapter-7: System of Particles and Rotational Motion
<b>August</b>	Unit-VI Gravitation Chapter-8: Gravitation
<b>September/October</b>	Unit-VII Properties of Bulk Matter Chapter-9: Mechanical Properties of Solids Chapter-10: Mechanical Properties of Fluids Chapter-11: Thermal Properties of Matter
<b>November</b>	Unit-VIII Thermodynamics Chapter-12: Thermodynamics
<b>November</b>	Unit-IX Behaviour of Perfect Gases and Kinetic Theory of Gases Chapter-13: Kinetic Theory
<b>November/December</b>	Unit-X Oscillations and Waves Chapter-14: Oscillations Chapter-15: Waves

## PHYSICS (042) Practicals

### SECTION-A

#### Experiments

1. To measure diameter of a small spherical/cylindrical body and to measure internal diameter and depth of a given beaker/calorimeter using Vernier Callipers and hence find its volume.
2. To measure diameter of a given wire and thickness of a given sheet using screw gauge.
3. To determine volume of an irregular lamina using screw gauge.
4. To determine radius of curvature of a given spherical surface by a spherometer.
5. To determine the mass of two different objects using a beam balance.
6. To find the weight of a given body using parallelogram law of vectors.
7. Using a simple pendulum, plot its  $L-T^2$  graph and use it to find the effective length of second's pendulum.
8. To study variation of time period of a simple pendulum of a given length by taking bobs of same size but different masses and interpret the result.

9. To study the relationship between force of limiting friction and normal reaction and to find the co-efficient of friction between a block and a horizontal surface.
10. To find the downward force, along an inclined plane, acting on a roller due to gravitational pull of the earth and study its relationship with the angle of inclination  $\theta$  by plotting graph between force and  $\sin\theta$ .

#### Activities

1. To make a paper scale of given least count, e.g., 0.2cm, 0.5 cm.
2. To determine mass of a given body using a metre scale by principle of moments.
3. To plot a graph for a given set of data, with proper choice of scales and error bars.
4. To measure the force of limiting friction for rolling of a roller on a horizontal plane.
5. To study the variation in range of a projectile with angle of projection.
6. To study the conservation of energy of a ball rolling down on an inclined plane (using a double inclined plane).
7. To study dissipation of energy of a simple pendulum by plotting a graph between square of amplitude and time.

### SECTION-B

#### Experiments

1. To determine Young's modulus of elasticity of the material of a given wire.
2. To find the force constant of a helical spring by plotting a graph between load and extension.
3. To study the variation in volume with pressure for a sample of air at constant temperature by plotting graphs between P and V, and between P and  $1/V$ .
4. To determine the surface tension of water by capillary rise method.
5. To determine the coefficient of viscosity of a given viscous liquid by measuring terminal velocity of a given spherical body.
6. To study the relationship between the temperature of a hot body and time by plotting a cooling curve.
7. To determine specific heat capacity of a given solid by method of mixtures.
8. To study the relation between frequency and length of a given wire under constant tension using sonometer.
9. To study the relation between the length of a given wire and tension for constant frequency using sonometer.
10. To find the speed of sound in air at room temperature using a resonance tube by two resonance positions.

#### Activities

1. To observe change of state and plot a cooling curve for molten wax.
2. To observe and explain the effect of heating on a bi-metallic strip.
3. To note the change in level of liquid in a container on heating and interpret the observations.
4. To study the effect of detergent on surface tension of water by observing capillary rise.
5. To study the factors affecting the rate of loss of heat of a liquid.
6. To study the effect of load on depression of a suitably clamped metre scale loaded at (i) its end (ii) in the middle.
7. To observe the decrease in pressure with increase in velocity of a fluid.

#### Experiments

## Subject : CHEMISTRY (043)

MONTH	TOPICS
APRIL	Ch 1 Some basic concepts of chemistry Ch 2 Structure of the atom
MAY	Ch 2 Structure of the atom (contd) Ch 5 redox reactions
JULY	Ch 3 Periodic classification of elements Ch 4 Chemical bonding and molecular structure
AUGUST	Ch 4 Chemical bonding and molecular structure (contd) Ch 6 Thermodynamics
OCTOBER	Ch 6 Thermodynamics (Contd) Ch 7 Equilibrium
NOVEMBER	Ch 8 organic chemistry Ch 9 Hydrocarbons

## CHEMISTRY (043) Practicals

A. Basic Laboratory Techniques 1. Cutting glass tube and glass rod

2. Bending a glass tube
3. Drawing out a glass jet
4. Boring a cork

B. Characterization and Purification of Chemical Substances

1. Determination of melting point of an organic compound.
2. Determination of boiling point of an organic compound.
3. Crystallization of impure sample of any one of the following: Alum, Copper Sulphate, Benzoic Acid.

C. Experiments based on pH a) Any one of the following experiments: • Determination of pH of some solutions obtained from fruit juices, solution of known and varied concentrations of acids, bases and salts using pH paper or universal indicator. • Comparing the pH of solutions of strong and weak acids of same concentration. Study the pH change in the titration of a strong base using universal indicator.

b) Study the pH change by common-ion in case of weak acids and weak bases.

D. Chemical Equilibrium One of the following experiments: a) Study the shift in equilibrium between ferric ions and thiocyanate ions by increasing/decreasing the concentration of either of the ions.

b) Study the shift in equilibrium between  $[\text{Co}(\text{H}_2\text{O})_6]^{2+}$  and chloride ions by changing the concentration of either of the ions.

E. Quantitative Estimation i. Using a mechanical balance/electronic balance.

ii. Preparation of standard solution of Oxalic acid.

iii. Determination of strength of a given solution of Sodium hydroxide by titrating it against standard solution of Oxalic acid.

iv. Preparation of standard solution of Sodium carbonate

v. Determination of strength of a given solution of hydrochloric acid by titrating it against standard Sodium Carbonate solution.

F. Qualitative Analysis

a) Determination of one anion and one cation in a given salt Cations-  $\text{Pb}^{2+}$ ,  $\text{Cu}^{2+}$ ,  $\text{As}^{3+}$ ,  $\text{Al}^{3+}$ ,  $\text{Fe}^{3+}$ ,  $\text{Mn}^{2+}$ ,  $\text{Ni}^{2+}$ ,  $\text{Zn}^{2+}$ ,  $\text{Co}^{2+}$ ,  $\text{Ca}^{2+}$ ,  $\text{Sr}^{2+}$ ,  $\text{Ba}^{2+}$ ,  $\text{Mg}^{2+}$ ,  $\text{NH}_4^+$  Anions –  $\text{CO}_3^{2-}$ ,  $\text{S}^{2-}$ ,  $\text{NO}_2^-$ ,  $\text{SO}_3^{2-}$ ,  $\text{SO}_4^{2-}$ ,  $\text{NO}_3^-$ ,  $\text{Cl}^-$ ,  $\text{Br}^-$ ,  $\text{I}^-$ ,  $\text{PO}_4^{3-}$ ,  $\text{CH}_3\text{COO}^-$  (Note: Insoluble salts excluded)

b) Detection of -Nitrogen, Sulphur, Chlorine in organic compounds.

## Subject : MATHEMATICS (041)

Month	Topic
April -May	Sets , Relations and Functions, Trigonometric Functions , Permutations and Combinations
June-July	Linear Inequalities, Limits and Derivatives, Binomial Theorm
August -September	Complex Numbers , Sequence and Series , 3 D Geometry,Probability
October	Straight Lines , Statistics

## Subject : BIOLOGY (044)

Month	Chapters ( Total No of chapters :22 Deleted : 19 )
April	Ch- 1 The Living world, Ch-2 Biological Classification, Ch- 17 Breathing & Exchange of gases
May	Ch- 18 Body fluids & Circulation, Ch- 19 Excretory Products & their Elimination , Ch-20 Locomotion & movement, Ch- 21 Neural Control & Coordination , Ch-22 Chemical coordination & Integration
July	Ch-8 Cell the unit of life,Ch-10 Cell cycle & cell division
August	Ch-3 Plant Kingdom , Ch-4 Animal Kingdom, Ch-5 Morphology of flowering plant
September	Ch-15 Plant growth & development, Ch-7 Structural Organisation in Animals
October	Ch-13 Phtosynthesis in Higher Plants, Ch-14 Respiration In plants
November	Ch-6 Anatomy of flowering Plant , Ch- 9 Biomolecules
December	Examination
January	Revision
February	Final Examination

## BIOLOGY (044) Practicals

MONTH	DETAILS OF THE EXPERIMENTS TO BE PERFORMED	DETAILS OF THE SPOTTINGS TO BE PERFORMED
May	1. Study and describe three locally available common flowering plants one each of the families Solanaceae, Fabaceae and Liliaceae.	----
July	2. Preparation and study of T.S. Dicot and Monocot roots and stems	1. Study of plant specimens, slides/models of bacteria, oscillatoria, spirogyra, Rhizopus, Mushroom, Yeast, Liverwort, Moss, Pine, fern, Lichen, one monocot and one dicot plant.
Aug	3. Study osmosis by potato osmometer.	2. Study of Animal specimens/slides /Models of Amoeba, Hydra, Liverfluke, Ascaris, Leech, earthworm, prawn, silkworm, honeybee, snail, starfish, shark, rohu, frog, lizard, pegeon, rabbit.
Sep	4. Study of distribution of stomata for the comparative study of rates of transpiration.	3. a. Study of palisade cell, parenchyma, collenchymas, sclerenchyma, xylem, phloem from plant tissue. b. Squamous epithelium, muscle fibre and mammalian blood smear from animal tissue through temporary or permanent slides.
Oct	5. Test for the presence of sugar starch and proteins & fats.	4. Study of Mitosis in onion root tip cells and grasshopper cells from permanent slides. 5. Study of imbibitions in seeds/raisins
Nov	6. Separation of plant pigments through paper chromatography. 7. Study the rate of respiration.	6. Study of different modifications in root, stem and leaves. 7. Study of different types of cymose and racemose inflorescence

		8. Observation and Comment on the experimental set up for sharing aerobic respiration, phototropism and apical bud removal and suction due to transpiration.
<b>Dec</b>	8. To test the presence of sugar and urea in urine. 9. To test the presence of albumin and Bile salts in urine.	9. Study of human skeleton and types of joints. 10. Study of external Morphology of cockroach through specimens/models.

### **Subject : PHYSICAL EDUCATION (048)**

MONTH	CHAPTER	ACTIVITY
April	Ch-1 Changing Trends and career options in Phy. Edu Ch-2 Olympic Movement	Presentation on career options in Phy. Edu
May	Ch-3 Yoga Ch-4 Phy. Edu and sports for CWSN	Perform Different type of asanas related to different physical problems
July	Ch-5 Fitness - wellness and lifestyle	Make PPT on first Aid
August	Ch-6 Test and Measurements Ch-7 Anatomy and Physiology	Make Model on any organ system like Heart , Respiration , skeleton.
October	Ch-8 Biomechanics and sports Ch-9 Psychology and Sports	Presentation on different type of movements.
November	Ch-10 Training and Doping in sports	

### **Subject : HINDUSTANI MUSIC VOCAL (034)**

MONTH	TOPICS
<b>April-May</b>	Defination of Nada, Swara, Saptak, Brief study of Margi Sangeet, Dharupad, Teen tala, Introduction of raga Bihag
<b>June –July</b>	Definition of Sharuti, Thaati, Jati, Brief study of Desi sangeet, Khyal, Life sketch of V.D Paluskar, Notation raga Bihag, Ek tala
<b>Aug-Sep</b>	Definition of Laya, Tala, Raga, Life sketch of Tansen, raga Bhimplasi, Chautala
<b>Oct-Nov</b>	Life sketch of VN Bhatkhande, Knowledge of the structure of Tanpura, Raga Bhairvi

### **Subject : PAINTING (049)**

MONTH	TOPICS
<b>April-May</b>	Unit I - 1. Pre-historic Rock painting 2. Art of Indus Valley Civilisation
<b>July - Aug</b>	Buddhist , Jain & Hindu Art Unit II - 3. General Introduction of Art during Mauryan, Shunga, Kushana & Gupta Period 4. Art of Ajanta
<b>Sep - Oct - Nov</b>	Temple sculptures, Bronze & Indo-Islamic architecture Unit III- 5. Indian Temple sculpture 6. Indian Bronze architecture 7. Indo-Islamic architecture