

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

Subject : ENGLISH CORE (301)

MONTH	LESSON	COURSE CONTENT	WRITING SKILLS	ACTIVITY
April	*The Last Lesson *Lost Spring *My Mother at Sixty Six *Keeping Quiet	*The Third Level *The Tiger King	*Notice *Invitation: Card, formal & informal invitational letter, and replies	Making invitation cards
May	*Deep Water *A Thing Of Beauty	*Journey to The *End Of The Earth	*Letter to the editor *Job application	SKETCHING COMIC STRIPS
July	*The Rattrap	*The Enemy	*Article writing *Report writing	
August	*Indigo *Poets and Pancakes *A Roadside Stand	*On The Face Of It	Revision of short writing skills	Role play
October	*The Interview *Going Places *Aunt Jennifer's Tigers	*Memories Of Childhood	Revision of long writing skills	Story Telling
November	Revision + Preparation	Revision	Revision	
December	of English Project			

Subject : PHYSICAL EDUCATION (048)

MONTH	CHAPTER	ACTIVITY
April	Ch-1 Planning in sports Ch-2 Children and women in sports	Host inter-class Tournament of any game using Knockout or league Fixture.
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 Sports and Nutrition	Make Chart on Nutrition Diet
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	Perform projectile in different games.
November	Ch-10 Training in sports	Prepare flow charts on different components and development methods of component in sports

Subject : HISTORY (027)

MONTH	LESSONS TO BE COVERED
April	1- Bricks, Beads and Bones 2- Kings, Farmers and Towns
May	3- Kinship, Caste and Class - Early Societies 4- Thinkers, Beliefs and Buildings
June	Summer Vacation
July	5- Through the eyes of travellers 6- Bhakti-Sufi Traditions

August	7- An Imperial Capital- Vijayanagar Empire 8- Peasants Zamindars and the State Revision of April- August
September	9-Colonialism and the countryside 10- Rebels and the Raj
October	11- Mahatma Gandhi and the National Movement Civil Disobedience and Beyond 12- Framing of the Constitution The Beginning of a New Era
November- February	Revision

Subject : POLITICAL SCIENCE (028)

MONTH	LESSONS TO BE COVERED
April	Part-B Ch-1 Challenges of Nation- Building Ch- 2 Era of One Party Dominance Ch-3 Politics of Planned Development
May	Part-B Ch- 4 India's External Relations Ch- 5 Challenges to and Restoration of the Congress System Ch- 6 Crisis of Democratic Order
June	Summer Vacation
July	Part-B Ch-7 Regional Aspirations Ch- 8 Recent Developments in Indian Politics Part-A Ch- 1 The End of Bipolarity
August	Part- A Ch- 2 Contemporary Centres of Powers Ch- 3 Contemporary South Asia Ch- 4 International Organizations Ch- 5 Security in the Contemporary World
September	Half Yearly Examination
October	Part- A Ch- 6 Environment and Natural Resources Ch- 7 Globalisation
November- February	Revision of full syllabus

Subject : HINDUSTANI MUSIC VOCAL (034)

April- may - Definition of Alankar, Meend, Khatka, The time theory of ragas, Raga Malkauns, Tala Roopak

June-July - Definition of Kan, Murki, Gamak, Detail study of Sangeet Parijat, life sketch of Bade Gulam Ali,
Raga Bhairav, Tala jhap tala

Aug –Sep Definition of Gram, Murchna, Alap, Tana, life sketch of Krihan rao Shankar pandit, Raga Bageshri, Detail study of Sangeet Ratnakar

Oct-nov - Tuning of Tanpura, Tala Dhamar

Subject : PUNJABI (104)

ਅਪ੍ਰੈਲ	ਅਣਡਿੱਠਾ ਪੈਰੋ ਨਾਲ ਸੰਬੰਧਿਤ ਪ੍ਰਸ਼ਨ ਪੁੱਤਰ ਕਰਵਾਏ ਜਾਣਗੇ । ਵਾਕ -ਵਟਾਂਦਰਾ ਕਰਵਾਇਆ ਜਾਵੇਗਾ । ਅਖਾਣ 1-20 ਕਰਵਾਏ ਜਾਣਗੇ । ਐਕਟੀਵਿਟੀ - ਨਿਤ ਵਰਤੋਂ ਵਾਲੇ ਅਖਾਣ ਸਕਰੈਪ ਬੁੱਕ ਤੇ ਲਿਖੋ ਜਾਂ ਫਲੈਸ਼ ਕਾਰਡ ਤਿਆਰ ਕਰੋ । ਕਵਿਤਾ ਟੁਕੜੀ ਜੱਗ ਤੋਂ ਨਿਆਰੀ ਕਰਵਾਈ ਜਾਏਗੀ। ਸਾਂਝ ਕਹਾਣੀ ਕਰਵਾਈ ਜਾਵੇਗੀ । ਐਕਟੀਵਿਟੀ - ਸੜਕ ਤੇ ਜਾਂਦੇ ਹੋਏ ਜੇ ਤੁਸੀਂ ਕਿਸੇ ਦੀ ਮਦਦ ਕੀਤੀ ਹੈ ਤਾਂ ਸਾਹਿਤ ਦੇ ਕਿਸੇ ਵੀ ਰੂਪ ਵਿੱਚ ਸਾਂਝੀ ਕਰੋ ।
ਮਈ	ਕਾਰ- ਵਿਹਾਰ ਦੇ ਪੱਤਰ । ਦਿੱਤੇ ਵਿਸ਼ੇ ਤੇ ਪੈਰਾ -ਰਚਨਾ ਕਰਵਾਈ ਜਾਏਗੀ । ਕਵਿਤਾ ਤਾਜ ਮਹਿਲ ਤੇ ਚੁੰਮ ਚੁੰਮ ਰੱਖੋ ਨੀ ਇਹ ਕਲਗੀ ਜੁਝਾਰ ਦੀ ਕਰਵਾਈ ਜਾਵੇਗੀ । ਨੀਲੀ ਕਹਾਣੀ ਕਰਵਾਈ ਜਾਵੇਗੀ । ਪੰਜਾਬ ਦੇ ਮੇਲੇ ਤੇ ਤਿਉਹਾਰ । ਪੰਜਾਬ ਦੇ ਰਸਮ -ਰਿਵਾਜ । ਐਕਟੀਵਿਟੀ - ਗੁਰੂ ਗੋਬਿੰਦ ਸਿੰਘ ਜੀ ਦੇ ਪਰਿਵਾਰ ਬਾਰੇ ਸਕਰੈਪ ਬੁੱਕ ਤੇ ਲਿਖੋ ।
ਜੁਲਾਈ	ਪੰਜਾਬ ਦੀਆਂ ਲੋਕ -ਖੇਡਾਂ ਪੰਜਾਬ ਦੇ ਲੋਕ- ਨਾਚ ਲੇਖ ਕਰਵਾਏ ਜਾਣਗੇ । ਐਕਟੀਵਿਟੀ ਵਿਦਿਆਰਥੀ ਵਿਰਾਸਤੀ ਖੇਡਾਂ ਤੇ ਪ੍ਰੋਜੈਕਟ ਤਿਆਰ ਕਰਨਗੇ । ਵਿਦਿਆਰਥੀ ਬੋਰਡ ਵੱਲੋਂ ਸੁਝਾਏ ਗਏ ਪ੍ਰੋਜੈਕਟ ਤਿਆਰ ਕਰਕੇ ਲਿਆਉਣਗੇ ।
ਅਗਸਤ	ਮਾੜਾ ਬੰਦਾ ,ਘਰ ਜਾਹ ਆਪਣੇ ਕਹਾਣੀ ਕਰਵਾਈ ਜਾਵੇਗੀ । ਮੇਰਾ ਬਚਪਨ, ਵਾਰਿਸ ਸ਼ਾਹ, ਗੀਤ ਕਵਿਤਾ ਕਰਵਾਈ ਜਾਵੇਗੀ । ਐਕਟੀਵਿਟੀ ਆਪਣੇ ਬਚਪਨ ਦੀਆਂ ਯਾਦਾਂ ਬਾਰੇ ਕਵਿਤਾ ਤਿਆਰ ਕਰੋ । ਜਾਂ ਬਚਪਨ ਦੀ ਯਾਦ ਕਿਸੇ ਵੀ ਸਾਹਿਤ ਦੇ ਰੂਪ ਵਿੱਚ ਵਿਅਕਤ ਕਰੋ । ਕਿਸੇ ਵਿਆਹ ਵਿੱਚ ਤੁਸੀਂ ਜਿਹੜੀ ਜਿੰਮੇਵਾਰੀ ਨਿਭਾਈ ਹੋਵੇ ਉਸ ਬਾਰੇ ਲਿਖੋ ।
ਸਤੰਬਰ	ਛਿਮਾਰੀ ਪ੍ਰੀਖਿਆ ਦੀ ਦੁਹਰਾਈ ਕਰਵਾਈ ਜਾਵੇਗੀ ।
ਅਕਤੂਬਰ	ਪੱਤਰ ਅਤੇ ਪੈਰਾ -ਰਚਨਾ ਦੀ ਦੁਹਰਾਈ ਕਰਵਾਈ ਜਾਵੇਗੀ ।
ਨਵੰਬਰ	ਕਵਿਤਾਵਾਂ ਦੀ ਦੁਹਰਾਈ ਕਰਵਾਈ ਜਾਵੇਗੀ । ਕਹਾਣੀਆਂ ਅਤੇ ਅਖਾਣ ਕਰਵਾਏ ਜਾਣਗੇ ।
ਦਸੰਬਰ	ਕਹਾਣੀਆਂ ਦੀ ਦੁਹਰਾਈ ਕਰਵਾਈ ਜਾਵੇਗੀ ਅਤੇ ਵਿਆਕਰਨ ਦੀ ਦੁਹਰਾਈ ਕਰਵਾਈ ਜਾਵੇਗੀ ।
ਜਨਵਰੀ	ਵਾਕ ਵਟਾਂਦਰਾ ਤੇ ਅਖਾਣ ਦੁਹਰਾਈ ।
ਫਰਵਰੀ	ਕਵਿਤਾ ,ਕਹਾਣੀਆਂ, ਵਾਕ-ਵਟਾਂਦਰਾ ਦੀ ਦੁਹਰਾਈ ।

Subject : PAINTING (049)

MONTH	TOPICS
April-May	Unit I - 1. The Rajasthani School of Miniature Painting 2. The Pahari School of Miniature Painting
July - Aug	Unit II - 3. The Mughal School of Miniature Painting 4. The Deccan School of Miniature Painting
Sep - Oct - Nov	Unit III- 5. The Bengal School of Painting 6. The Modern Trends in Indian Art

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

Subject : ENGLISH CORE (301)

MONTH	LESSON	COURSE CONTENT	WRITING SKILLS	ACTIVITY
April	*The Last Lesson *Lost Spring *My Mother at Sixty Six *Keeping Quiet	*The Third Level *The Tiger King	*Notice *Invitation: Card, formal & informal invitational letter, and replies	Making invitation cards
May	*Deep Water *A Thing Of Beauty	*Journey to The *End Of The Earth	*Letter to the editor *Job application	SKETCHING COMIC STRIPS
July	*The Rattrap	*The Enemy	*Article writing *Report writing	
August	*Indigo *Poets and Pancakes *A Roadside Stand	*On The Face Of It	Revision of short writing skills	Role play
October	*The Interview *Going Places *Aunt Jennifer's Tigers	*Memories Of Childhood	Revision of long writing skills	Story Telling
November December	Revision + Preparation of English Project	Revision	Revision	

Subject : PHYSICAL EDUCATION (048)

MONTH	CHAPTER	ACTIVITY
April	Ch-1 Planning in sports Ch-2 Children and women in sports	Host inter-class Tournament of any game using Knockout or league Fixture.
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 Sports and Nutrition	Make Chart on Nutrition Diet
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	Perform projectile in different games.
November	Ch-10 Training in sports	Prepare flow charts on different components and development methods of component in sports

Subject : ECONOMICS (030)

MONTH	UNIT AND CONTENT	ACTIVITY
APRIL	Unit 2: Money and Banking Money – meaning and functions, supply of money - Currency held by the public and net demand deposits held by commercial banks. Money creation by the commercial banking system. Central bank and its functions (example of the Reserve Bank of India): Bank of issue, Govt. Bank, Banker's Bank, Control of Credit through Bank Rate, Cash Reserve Ratio (CRR), Statutory Liquidity Ratio (SLR), Repo Rate and Reverse Repo Rate, Open Market Operations, Margin requirement.	Role play by the students on Barter System and how money evolve the limitations of Barter System Visit to a bank for explaining function of Commercial Bank with credit creation process or how to fill the Blank Cheque and

	<p>Unit 4: Government Budget and the Economy Government budget - meaning, objectives and components. Classification of receipts - revenue receipts and capital receipts; Classification of expenditure – revenue expenditure and capital expenditure. Balanced, Surplus and Deficit Budget – measures of government deficit.</p>	<p>Deposit slip.</p> <p>Quiz- Classification into Receipts and Expenditure of various items.</p>
MAY	<p>Unit 6: Development Experience (1947-90) and Economic Reforms since 1991 A brief introduction of the state of Indian economy on the eve of independence. Indian economic system and common goals of Five Year Plans. Main features, problems and policies of agriculture (institutional aspects and new agricultural strategy), industry (IPR 1956; SSI – role & importance) and foreign trade. Economic Reforms since 1991: Features and appraisals of liberalisation, globalisation and privatisation (LPG policy) Concepts of demonetization and GST</p>	<p>Slide Show or Movie Shown a chart of all Five Year Plans Strategies. Flip Classroom PPT on Navratnas</p>
JULY	<p>Unit3: Determination of Income and Employment Aggregate demand and its components. Propensity to consume and propensity to save (average and marginal). Short-run equilibrium output; investment multiplier and its mechanism. Meaning of full employment and involuntary unemployment. Problems of excess demand and deficient demand; measures to correct them - changes in government spending, taxes and money supply Unit 7: Current challenges facing Indian Economy Human Capital Formation: How people become resource; Role of human capital in economic development; Growth of Education Sector in India</p>	<p>Worksheets on each concepts and numericals</p>
AUGUST	<p>Unit 7: Current challenges facing Indian Economy (contd.) Rural development: Key issues - credit and - role of cooperatives; agricultural diversification; alternative farming - organic farming marketing. Unit 5: Balance of Payments Balance of payments account - meaning and components; Balance of payments – Surplus and Deficit Foreign exchange rate - meaning of fixed and flexible rates and managed floating. Determination of exchange rate in a free market, Merits and demerits of flexible and fixed exchange rate. Managed Floating exchange rate system Revision</p>	<p>Group Discussion & Debate on plans & policies of Govt. regarding Rural Development and Human Capital Formation.</p>
SEPTEMBER	REVISION AND EXAMS	
OCTOBER	<p>Unit 1: National Income and Related Aggregates What is Macroeconomics? Basic concepts in macroeconomics: consumption goods, capital goods, final goods, intermediate goods; stocks and flows; gross investment and depreciation.</p>	<p>Worksheet on computation of National Income</p>

	<p>Circular flow of income (two sector model); Methods of calculating National Income - Value Added or Product method, Expenditure method, Income method.</p> <p>Aggregates related to National Income: Gross National Product (GNP), Net National Product (NNP), Gross Domestic Product (GDP) and Net Domestic Product (NDP) – at market price, at factor cost; Real and Nominal GDP GDP Deflator, GDP and Welfare</p> <p>Unit 7: Current challenges facing Indian Economy (Cont.)</p> <p>Employment: Growth and changes in work force participation rate in formal and informal sectors; problems and policies Sustainable Economic Development: Meaning, Effects of Economic Development on Resources and Environment, including global warming</p>	
NOVEMBER	<p>Unit 8: Development Experience of India</p> <p>A comparison with neighbours -India and Pakistan India and China Issues: economic growth, population, sectoral development and other Human Development Indicators REVISION</p>	
DEC - MAR	REVISION & EXAMS	

Subject : BUSINESS STUDIES (054)

Class 12 Commerce (Business Studies)	
March	<ul style="list-style-type: none"> Unit-1 Nature and Significance of Management
April	<ul style="list-style-type: none"> Unit-1 Nature and Significance of Management Unit-1 (Make a list and collage of Profit and Non-Profit, Service & Manufacturing, Big & Small organisations that need management OR List the Activities that a HOSPITAL/PETROL PUMP/SCHOOL needs to manage its operations. Mind Map, CASE Study Discussion Unit-2 Principles of Management Unit-2 Students will be given slips of headings and they will write headings on green board to the related Topic), Mind Map, CASE Study Discussion. Unit-12 Consumer Protection (Role play of shopkeeper and consumer), Mind Map, CASE Study Discussion.
May	<ul style="list-style-type: none"> Unit-12 Consumer Protection Unit 11 Marketing Make a chart of (4 P's), Comparative study of philosophies, Mind Map, CASE Study Discussion (Revision PT-1)
June	

July	<ul style="list-style-type: none"> • Unit-3 Business Environment (Make a PPT on Demonetisation OR Dimensions of Business Environment), Mind Map, CASE Study Discussion • Unit-4 Planning (Make a PPT on Planning Importance and limitations), Mind Map, CASE Study Discussion • Unit-5 Organising (Students will discuss any party/function organisation experience), Mind Map, CASE Study Discussion
August	<ul style="list-style-type: none"> • Unit-5 Organising • Unit-6 Staffing Collect the NEWS paper cutting of Advertisement of Recruitment. Mind Map, CASE Study Discussion (Revision HY Exams)
September	<ul style="list-style-type: none"> • Unit-7 Directing (Make a chart on Maslow need hierarchy), Mind Map, CASE Study Discussion (Term-1 Exams)
October	<ul style="list-style-type: none"> • Unit-7 Directing (Communication Elements & Barriers (Co-relate barrier examples from school, Party and home environment) • Unit-8 Controlling (Make a list of examples of controlling in real life), Mind Map, CASE Study Discussion • Unit-9 Financial Management Activity: Headings slips of topics and headings, Mind Map, CASE Study Discussion
November	<ul style="list-style-type: none"> • Unit-9 Financial Management • Unit-10 Financial Market Make Chart/PPT on Primary market and Secondary market DEMAT a/c opening procedure Chart/PPT, Mind Map, CASE Study Discussion <p>Revision & Tests</p>
December	Revision & Tests
January	Revision & Tests
February	Revision & Tests

Subject : ACCOUNTANCY (055)

Month	Units	Activity
April	Accounting for Partnership firm Fundamentals	Role play. Two students, representing potential partners, engage in a negotiation to establish a partnership agreement for their business venture.
May	Goodwill – Nature and Valuation. Change in Profit Sharing Ratio. Admission of a partner.	Divide students into small groups and assign each group a case study or scenario involving goodwill valuation. Instruct each group to analyze the given case study and determine the appropriate method(s) for valuing goodwill. Introduce a scenario where there is a proposed change in the profit-sharing ratio due to various reasons such as a new partner joining, an existing partner leaving, or changes in contributions. MCQs , prepare Revaluation Account on chart paper, and slips
June	Summer break	Summer break
July	Retirement of a partner Death of a partner Dissolution of a partner. Share capital	Encourage students to apply the concepts learned to real-world scenarios and partnerships they may encounter in their future careers. Encourage students to reflect on the challenges and considerations involved in partnership dissolution and how they would address them in practice. Discuss the importance of share capital as a source of funding for corporations and its role in determining ownership and control.
August	Issue of debentures Financial statements of a company.	Discuss the pros and cons of debenture financing for each company and propose alternative financing options. Discuss the stakeholders who use financial statements and the key information they seek from them.
September	Financial statements analysis. Comparative and common sized balance sheet .	Highlight the interrelationships between the financial statements and how changes in one statement can affect others. Distribute worksheets with comparative balance sheet data and instruct students to identify trends, changes, and potential areas of concern.
October	Accounting Ratios	Encourage students to identify trends, strengths, weaknesses, and potential areas for improvement based on the ratio analysis
November	Cash flow statement	Instruct students to prepare a cash flow statement using the indirect method, starting with net income and adjusting for non-cash items and changes in working capital..

December	Revision	
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Subject : HINDUSTANI MUSIC VOCAL (034)

April- may Definition of Alankar, Meend, Khatka, The time theory of ragas, Raga Malkauns, Tala Roopak

June-July - Definition of Kan, Murki, Gamak, Detail study of Sangeet Parijat, life sketch of Bade gulam ali, Raga Bhairav, Tala jhap tala

Aug –Sep Definition of Gram, Murchna, Alap, Tana, life sketch of Krihan rao Shankar pandit, Raga Bageshri, Detail study of Sangeet Ratnakar

Oct-nov - Tuning of Tanpura, Tala Dhamar

Subject : PAINTING (049)

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

Subject : ENGLISH CORE (301)

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Subject : PHYSICS (042)

Month	Name of Unit and chapter
April	Unit-I Electrostatics Chapter-1: Electric Charges and Fields Chapter-2: Electrostatic Potential and Capacitance
April/May	Unit-II Current Electricity Chapter-3: Current Electricity
May/July	Unit-III Magnetic Effects of Current and Magnetism Chapter-4: Moving Charges and Magnetism Chapter-5: Magnetism and Matter
July/August	Unit-IV Electromagnetic Induction and Alternating Currents Chapter-6: Electromagnetic Induction Chapter-7: Alternating Current
August	Unit-V Electromagnetic Waves Chapter-8: Electromagnetic Waves
August/September	Unit-VI Optics Chapter-9: Ray Optics and Optical Instruments Chapter-10: Wave Optics
October	Unit-VII Dual Nature of Radiation and Matter Chapter-11: Dual Nature of Radiation and Matter
October	Unit-VIII Atoms and Nuclei Chapter-12: Atoms Chapter-13: Nuclei
November	Unit-IX Electronic Devices Chapter-14: Semiconductor Electronics: Materials, Devices and Simple Circuits

PHYSICS (042) Practicals

SECTION–A

1. To determine resistivity of two / three wires by plotting a graph for potential difference versus current.
2. To find resistance of a given wire / standard resistor using metre bridge.
3. To verify the laws of combination (series) of resistances using a metre bridge. OR To verify the laws of combination (parallel) of resistances using a metre bridge.
4. To determine resistance of a galvanometer by half-deflection method and to find its figure of merit. 5. To convert the given galvanometer (of known resistance and figure of merit) into a voltmeter of desired range and to verify the same. OR To convert the given galvanometer (of known resistance and figure of merit) into an ammeter of desired range and to verify the same.
6. To find the frequency of AC mains with a sonometer.

Activities

1. To measure the resistance and impedance of an inductor with or without iron core.
2. To measure resistance, voltage (AC/DC), current (AC) and check continuity of a given circuit using multimeter.
3. To assemble a household circuit comprising three bulbs, three (on/off) switches, a fuse and a power source.
4. To assemble the components of a given electrical circuit.
5. To study the variation in potential drop with length of a wire for a steady current.
6. To draw the diagram of a given open circuit comprising at least a battery, resistor/rheostat, key, ammeter and voltmeter. Mark the components that are not connected in proper order and correct the circuit and also the circuit diagram.

SECTION-B

Experiments

1. To find the value of v for different values of u in case of a concave mirror and to find the focal length.
2. To find the focal length of a convex mirror, using a convex lens.
3. To find the focal length of a convex lens by plotting graphs between u and v or between $1/u$ and $1/v$. 4. To find the focal length of a concave lens, using a convex lens.
5. To determine angle of minimum deviation for a given prism by plotting a graph between angle of incidence and angle of deviation.
6. To determine refractive index of a glass slab using a travelling microscope.
7. To find the refractive index of a liquid using convex lens and plane mirror.
8. To find the refractive index of a liquid using a concave mirror and a plane mirror.
9. To draw the I-V characteristic curve for a p-n junction diode in forward and reverse bias.

Activities

1. To identify a diode, an LED, a resistor and a capacitor from a mixed collection of such items.
2. Use of multimeter to see the unidirectional flow of current in case of a diode and an LED and check whether a given electronic component (e.g., diode) is in working order.
3. To study effect of intensity of light (by varying distance of the source) on an LDR.
4. To observe refraction and lateral deviation of a beam of light incident obliquely on a glass slab.
5. To observe diffraction of light due to a thin slit.
6. To study the nature and size of the image formed by a (i) convex lens, or (ii) concave mirror, on a screen by using a candle and a screen (for different distances of the candle from the lens/mirror).
7. To obtain a lens combination with the specified focal length by using two lenses from the given set of lenses.

Subject : CHEMISTRY (043)

MONTH	TOPICS
APRIL	Ch 6 Haloalkanes and Haloarenes Ch 10 Biomolecules
MAY	Ch 1 solutions Ch 2 electrochemistry
JULY	Ch 2 electrochemistry (contd) Ch 3 chemical kinetics
AUGUST	Ch 3 chemical kinetics (contd) Ch 4 d and f block elements
OCTOBER	Ch 5 coordination compounds Ch 7 Alcohol phenols and ethers
NOVEMBER	Ch 8 Aldehyde, ketones and carboxylic acid Ch 9 Amines

CHEMISTRY (043) Practicals

A. Surface Chemistry (a) Preparation of one lyophilic and one lyophobic sol Lyophilic sol - starch, egg albumin and gum Lyophobic sol - aluminium hydroxide, ferric hydroxide, arsenous sulphide. (b) Dialysis of sol-prepared in (a) above. (c) Study of the role of emulsifying agents in stabilizing the emulsion of different oils.

B. Chemical Kinetics

(a) Effect of concentration and temperature on the rate of reaction between Sodium Thiosulphate and Hydrochloric acid.

(b) Study of reaction rates of any one of the following: (i) Reaction of Iodide ion with Hydrogen Peroxide at room temperature using different concentration of Iodide ions. (ii) Reaction between Potassium Iodate, (KIO₃) and Sodium Sulphite: (Na₂SO₃) using starch solution as indicator (clock reaction).

C. Thermochemistry Any one of the following experiments

- i) Enthalpy of dissolution of Copper Sulphate or Potassium Nitrate.
- ii) Enthalpy of neutralization of strong acid (HCl) and strong base (NaOH).
- iii) Determination of enthalpy change during interaction (Hydrogen bond formation) between Acetone and Chloroform.

D. Electrochemistry Variation of cell potential in Zn/Zn²⁺ || Cu²⁺/Cu with change in concentration of electrolytes (CuSO₄ or ZnSO₄) at room temperature.

E. Chromatography

- i) Separation of pigments from extracts of leaves and flowers by paper chromatography and determination of R_f values.
- ii) Separation of constituents present in an inorganic mixture containing two cations only (constituents having large difference in R_f values to be provided).

F. Preparation of Inorganic Compounds Preparation of double salt of Ferrous Ammonium Sulphate or Potash Alum. Preparation of Potassium Ferric Oxalate.

G. Preparation of Organic Compounds Preparation of any one of the following compounds i) Acetanilide ii) Di-benzalAcetone iii) p-Nitroacetanilide iv) Aniline yellow or 2 - Naphthol Anilinedye.

H. Tests for the functional groups present in organic compounds: Unsaturation, alcoholic, phenolic, aldehydic, ketonic, carboxylic and amino (Primary) groups.

I. Characteristic tests of carbohydrates, fats and proteins in pure samples and their detection in given foodstuffs.

J. Determination of concentration/ molarity of KMnO₄ solution by titrating it against a standard solution of: i) Oxalic acid, ii) Ferrous Ammonium Sulphate (Students will be required to prepare standard solutions by weighing themselves).

K. Qualitative analysis Determination of one cation and one anion in a given salt. Cation : Pb²⁺, Cu²⁺ As³⁺, Al³⁺, Fe³⁺, Mn²⁺, Zn²⁺, Cu²⁺, Ni²⁺, Ca²⁺, Sr²⁺, Ba²⁺, Mg²⁺, NH₄⁺ + Anions: (CO₃)²⁻, S²⁻, (SO₃)²⁻, (NO₂)⁻, (SO₄)²⁻, Cl⁻, Br⁻, I⁻, PO₃⁴⁻, (C₂O₄)²⁻, CH₃COO⁻, NO₃⁻ (Note: Insoluble salts excluded)

Subject : MATHEMATICS

Month	Topic
April -May	Relations and Functions, Matrices and Determinants ,Linear Programming , Inverse Trigonometric Functions
June-July	Continuity and Differentiability ,Applications of Derivatives
August -September	Integrals , Applications of Integrals, Differential Equations
October	Vectors , 3D Geometry , Probability

Subject : BIOLOGY (044)

Month	Chapters (Total No of chapters :16 Deleted : 13)
April	Ch- 2 Sexual reproduction in flowering plants, Ch- 3 Human Reproduction, ch- 4 Reproductive Health, Ch-15 Biodiversity and its conservation
May	Ch- 5 Principle of Inheritance & Variation , Ch-8 Human health & diseases, Ch- 6 Molecular Basis of Inheritance
June	Investigatory project work
July	Ch- 7 Evolution ,Ch-13 Organisms & populations ,Ch- 14 Ecosystem
August	Ch- 10 Microbes in human welfare,Ch- 11 Biotechnology -principles & processes
September	Ch- 12 Biotechnology and its Applications
Oct-Nov	Revision & final submission of project file & practical file
Dec- Jan	Revision & Examination
February	Revision & Examination

BIOLOGY (044) Practical

MONTH	DETAILS OF THE XPERIMENTS TO BEBE PERFORMED
April- May	<ol style="list-style-type: none"> 1. Prepare a temporary mount to observe pollen germination. 2. Study the plant population density by quadrat method. 3. Study the plant population frequency by quadrat method. 4. Prepare a temporary mount of onion root tip to study mitosis. 5. Isolate DNA from available plant material such as spinach, green pea seeds, papaya, etc.
July- Aug	<ol style="list-style-type: none"> 6. Flowers adapted to pollination by different agencies (wind, insects, birds). 7. Pollen germination on stigma through a permanent slide or scanning electron micrograph. 8. Identification of stages of gamete development, i.e., T.S. of testis and T.S. of ovary through permanent slides (from grasshopper/mice). 9. Meiosis in onion bud cell or grasshopper testis through permanent slides. 10. T.S. of blastula through permanent slides (Mammalian).
Sept-Oct	<ol style="list-style-type: none"> 11. Mendelian inheritance using seeds of different colour/sizes of any plant 12. Prepared pedigree charts of any one of the genetic traits such as rolling of tongue, blood groups, ear lobes, widow's peak and colour blindness. 13. Controlled pollination - emasculation, tagging and bagging. 14. Common disease causing organisms like Ascaris, Entamoeba, Plasmodium, any fungus causing ringworm through permanent slides, models or virtual images or specimens. Comment on symptoms of diseases that they cause. 15. Models specimen showing symbiotic association in root modules of leguminous plants, Cuscuta on host, lichens.

	16. Flash cards models showing examples of homologous and analogous organs
Nov	<i>final submission of project file & practical file</i>

Subject : PHYSICAL EDUCATION (048)

MONTH	CHAPTER	ACTIVITY
April	Ch-1 Planning in sports Ch-2 Children and women in sports	Host inter-class Tournament of any game using Knockout or league Fixture.
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 Sports and Nutrition	Make Chart on Nutrition Diet
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	Perform projectile in different games.
November	Ch-10 Training in sports	Prepare flow charts on different components and development methods of component in sports

Subject : HINDUSTANI MUSIC VOCAL (034)

April- may Definition of Alankar, Meend, Khatka, The time theory of ragas, Raga Malkauns, Tala Roopak

June-July - Definition of Kan, Murki, Gamak, Detail study of Sangeet Parijat, life sketch of Bade gulam ali, Raga Bhairv, Tala jhap tala

Aug –Sep Definition of Gram, Murchna, Alap, Tana, life sketch of Krihan rao Shankar pandit, Raga Bageshri, Detail study of Sangeet Ratnakar

Oct-nov - Tuning of Tanpura, Tala Dhamar

Subject : Subject : PAINTING (049)

MONTH	TOPICS
April-May	Unit I - 1. The Rajasthani School of Miniature Painting 2. The Pahari School of Miniature Painting
July - Aug	Unit II - 3. The Mughal School of Miniature Painting 4. The Deccan School of Miniature Painting
Sep - Oct - Nov	Unit III- 5. The Bengal School of Painting 6. The Modern Trends in Indian Art