

Class Manual
Class XII Session 2022-23
English

TERM 1

Flamingo

L-1 The Last Lesson

Activity-Speech on procrastination/Importance of one's mother tongue

L-2 The Lost Spring

Activity-Report on 'Child Labour'

L-3 Deep Water

Activity-Mind map

L-4 The Rattrap

Activity-Word Grid

Poetry

P-1 My Mother At Sixty Six

Activity-Debate- Old age homes are the only hope of the elderly people

P-2 An Elementary School Classroom in a Slum

Activity-Mind Map based on poetic devices

P-3 Keeping Quiet

Activity-Article Writing- War and Peace

Vistas

L-1 The Third Level

Activity-Compare and Contrast the lifestyles of 1890s and 2020s

L-2 The Tiger King

Activity-Mind Map

L-3 Journey to the end of the Earth

Activity-P.P.T. on Antarctica (History, Flora and Fauna)

L-4 The Enemy

Activity-Flow chart on the events highlighted in the chapter

READING-Comprehension, Note making

WRITING-Advertisement, Notice, Poster making, Formal letter, Article writing

ASL

TERM 2

Flamingo

L-5 Indigo

Activity-1. Movie show

2. Bio data of M.K. Gandhi

3. Route map of Gandhi's journey from Calcutta to Champaran

L-6 Poets and Pancakes

Activity-Collect information of lead actors of 1950s and 1960s

L-7 The Interview

Activity-Worksheet, Various methods of interview and their drawbacks(Discussion)

L-8 Going Places

Activity-Group discussion- Hero Worship

Poetry

P-4 A Thing of Beauty

Activity-List various bounties of nature other than those found in the poem

P-5 A Roadside Stand

Activity- Article/Poster making- Social Inequality

P-6 Aunt Jennifer's Tigers

Activity-Project on Symbols and Imagery used in the poetry

Vistas

L-5 Should Wizard hit Mommy

Activity-Group discussion on role of parents in decision making for their children

L-6 On the face of it

Activity- Word Puzzle

L-7 Evans Tries an O-level

Activity-Mind Map

L-8 Memories of Childhood

Activity-(Group) P.P.T. on Hardships faced by Marginalized Communities

READING-Comprehensions

WRITING-Invitation and Replies, Job Application, Speech Writing, Report Writing, Formal Letter Writing

ASL

Final Exam

Maths

Unit-I: Relations and Functions

Relations and Functions

15 Periods

Types of relations: reflexive, symmetric, transitive and equivalence relations. One to one and onto functions, composite functions, inverse of a function.

Inverse Trigonometric Functions

15 Periods

Definition, range, domain, principal value branch. Graphs of inverse trigonometric functions Elementary properties of inverse trigonometric functions.

Unit-II: Algebra

Matrices

25 Periods

Concept, notation, order, equality, types of matrices, zero and identity matrix, transpose of a matrix, symmetric and skew symmetric matrices. Operation on matrices: Addition and multiplication and multiplication with a scalar. Simple properties of addition, multiplication and scalar multiplication. Non-commutativity of multiplication of matrices and existence of non-zero matrices whose product is the zero matrix (restrict to square matrices of order 2). Concept of elementary row and column operations. Invertible matrices and proof of the uniqueness of inverse, if it exists; (Here all matrices will have real entries).

Determinants

25 Periods

Determinant of a square matrix (up to 3×3 matrices), properties of determinants, minors, co-factors and applications of determinants in finding the area of a triangle. Adjoint and inverse of a square matrix. Consistency, inconsistency and number of solutions of system of linear equations by examples, solving system of linear equations in two or three variables (having unique solution) using inverse of a matrix.

Unit-III: Calculus

Continuity and Differentiability

20 Periods

Continuity and differentiability, derivative of composite functions, chain rule, derivative of inverse trigonometric functions, derivative of implicit functions. Concept of exponential and logarithmic functions. Derivatives of logarithmic and exponential functions. Logarithmic differentiation, derivative of functions expressed in parametric forms. Second order derivatives. Rolle's and Lagrange's Mean Value Theorems (without proof) and their geometric interpretation.

Applications of Derivatives

10 Periods

Applications of derivatives: rate of change of bodies, increasing/decreasing functions, tangents and normals, use of derivatives in approximation, maxima and minima (first derivative test motivated geometrically and second derivative test given as a provable tool). Simple problems (that illustrate basic principles and understanding of the subject as well as real-life situations).

Integrals

20 Periods

Integration as inverse process of differentiation. Integration of a variety of functions by substitution, by partial fractions and by parts, Evaluation of simple integrals.

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Definite integrals as a limit of a sum, Fundamental Theorem of Calculus (without proof). Basic properties of definite integrals and evaluation of definite integrals.

Applications of the Integrals

15 Periods

Applications in finding the area under simple curves, especially lines, circles/ parabolas/ellipses (in standard form only), Area between any of the two above said curves (the region should be clearly identifiable).

Differential Equations

15 Periods

Definition, order and degree, general and particular solutions of a differential equation. Formation of differential equation whose general solution is given. Solution of differential equations by method of separation of variables, solutions of homogeneous differential equations of first order and first degree. Solutions of linear differential equation of the type:

Unit-IV: Vectors and Three-Dimensional Geometry

Vectors

15 Periods

Vectors and scalars, magnitude and direction of a vector. Direction cosines and direction ratios of a vector. Types of vectors (equal, unit, zero, parallel and collinear vectors), position vector of a point, negative of a vector, components of a vector, addition of vectors, multiplication of a vector by a scalar, position vector of a point dividing a line segment in a given ratio. Definition, Geometrical Interpretation, properties and application of scalar (dot) product of vectors, vector (cross) product of vectors, scalar triple product of vectors.

Three - dimensional Geometry

15 Periods

Direction cosines and direction ratios of a line joining two points. Cartesian equation and vector equation of a line, coplanar and skew lines, shortest distance between two lines. Cartesian and vector equation of a plane. Angle between (i) two lines, (ii) two planes, (iii) a line and a plane. Distance of a point from a plane.

Unit-V: Linear Programming

1. Linear Programming

20 Periods

Introduction, related terminology such as constraints, objective function, optimization, different types of linear programming (L.P.) problems, mathematical formulation of L.P. problems, graphical method of solution for problems in two variables, feasible and infeasible regions (bounded or unbounded), feasible and infeasible solutions, optimal feasible solutions (up to three non-trivial constraints).

Unit-VI: Probability

1. Probability

30 Periods

Conditional probability, multiplication theorem on probability, independent events, total probability, Bayes' theorem, Random variable and its probability distribution, mean and variance of random variable. Binomial probability distribution.

BUSINESS STUDIES

Term-1

Ch-1 Nature and Significance of Management

Ch-2 Principles of Management

Ch-3 Business Environment

Ch-4 Planning

Ch-5 Organising

Ch-6 Staffing

Ch-7 Directing

Ch-8 Controlling

Project Work

Unit Test-I

July

Ch-1 Nature and Significance of Management

Ch-4 Planning

Ch-3 Business Environment

Ch-2 Principles of Management

Sept. 1st Terminal Examination:

Entire Syllabus concerned in 1st Term

Term-II

Ch-9 Business Finance

Ch-10 Financial Markets

Ch-11 Marketing Management

Ch-12 Consumer Protection

December: IInd Terminal Exam : Entire Syllabus & Project Work

January : Pre board Exam

Field trip – visit to industrial unit in Ludhiana.

Biology

Term I

Chapter 1 Sexual Reproduction in flowering plants

Chapter 2 Human Reproduction

Chapter 3 Reproduction Health

Chapter 4 Evolution

Unit Test I

Chapter 6 Principles of inheritance and variation

Chapter 7 Molecular basis of inheritance

Chapter 8 Human health and Diseases

Chapter 9 Strategies for enhancement in food production

Chapter 10 Microbes in human welfare

Chapter 11 Ecosystem

Terminal Examination I

Term-II

Chapter 12 Biotechnology-Principles and Processes

Chapter 13 Environmental Issue

Chapter 14 Biotechnology & Its Application

Chapter 15 Organisms & Population

Chapter 16 Biodiversity & Conservation

Pre-Board Exam - I

Pre-Board Exam – II

PHYSICS

Term-I

April: Chapter 1 Electric Charges and Fields:
Chapter 2 Electrostatic Potential and Capacitance

Practicals: i) To calculate resistance per unit length of an unknown resistance by making a graph between V and I
ii) To find unknown resistance using metre bridge

May

Chapter 3 Current Electricity
Chapter 4 Moving Charges & Magnetism

Unit - 1 Exam

July: Chapter 5 Magnetism and Matter
Chapter 6 Electromagnetic Induction
Practical: To determine the resistance and figure of merit of Galvanometer by half deflection method

August: Chapter 7 Alternating Current and Electrical Machines
Chapter 8 Electromagnetic Waves
Activities: Three activities of Section A

September: Chapter 9 Ray optics and Optical Instruments
Practical : i) To find the focal length of concave mirror using u, v method
ii) to find focal length of convex length by plotting a graph between u & v or $1/u$ and $1/v$.

1 Terminal Exams (Syllabus upto Sept)

Term-II October: Chapter 10 Wave Optics
Chapter 11 Dual Nature of Radiation and Matter

Practicals: i) To find refractive index and angle of minimum deviation in case of glass prism.
ii) To find refractive index of a glass slab using travelling microscope

November:

Chapter 12 Atoms
Chapter 13 Nuclei

December: Chapter 14 Semiconductor Electronics Practical: i) Characteristics of p-n junction
ii) Characteristics of Zener diode
Activities: Three activities of Section B

Revision

II Terminal Exam (December)

January: Pre Board Exam

CHEMISTRY

April-May

Unit-I Solid state

Activity-Ball and stick model

Unit-II Solution

Activity-To prepare M/20 Mohr's salt solution

Unit-III Electro Chemistry

Worksheet

Unit-IV Chemical Kinetics

Activity: To study the effect of temperature on the rate of reaction between sodium sulphite and dilute hydrochloric acid

Practical Work : a) To prepare double salt of Potash Alum and Mohr's salt

To prepare solution of Mohr's salt and KMnO_4 solution.

Volumetric analysis involving KMnO_4 Vs Oxalic Acid and KMnO_4 Vs Mohr's salt

Unit Test I

July

Unit-V Surface Chemistry

Worksheet

Unit-VI General Principle and Process of extraction of element

Activity: Separation of different pigments of the flowers by chromatography

August :

Unit-VII P-block elements

Worksheet

Unit-VIII D and f-block elements

Worksheet

Unit-IX Co-ordination compounds

Activity: To study applications of coordination chemistry in qualitative analysis

Practical Work :1) To detect functional group in a given organic compound Aspirin in the lab.

Unit Test II

September

Unit-X Halo arenes and halo alkanes

Activity: To study types of bonding in halo Alkanes and sodium chloride

Term Exam I - Entire Syllabus upto September

October

Unit-XI Alcohols, Phenols and Ethers

Activity: To distinguish between primary, secondary and tertiary alcohol

Unit-XII Aldehydes, Ketones and Carboxylic acid

Activity: To distinguish between aldehydes and ketones

Unit-XIII Organic compounds containing Nitrogen

Activity: Tests to show the presence of amino functional group

Unit-XV Polymers

Activity: Group discussion

November :

Unit-XIV Biomolecules

Activity: Chemical test to detect presence of starch, protein and carbohydrates in given substance

Unit-XVI Chemistry in Everyday Life

Activity: Make a list of antibiotics and anti-septics used by your family member when prescribed by doctor write the reasons for giving those medicines by doctor

Practical Work : To analyse the given salt and find out one acidic and basic radical

December : IInd Term Exams

January : Revision

ACCOUNTANCY

Term - 1

Part - B

Ch-I Analysis of Financial Statements

Ch-II Ratio Analysis

Ch-III Cash Flow Statement

Part - A

Accounting for Partnership Firms

Ch-1 Accounting for Partnership Firms – Fundamentals

Ch- 2 Admission

Ch-3 Retirement of Partnership Firms.

Ch-4 Reconstitution and Dissolution

July: Unit Test-I

Ch-1 Analysis of Financial Statements

Ch-2 Ratio Analysis

Ch-3 Cash Flow Statement

Ch-4 Accounting for Partnership Firms

Term-II

Company Accounts

Ch-1 Share Capital

Ch-2 Debentures - (Redemption of debentures deleted)

Ch-3 Financial Statements of Non Profit Organization

Project Work

December: Summative Assessment - II Entire Syllabus &Project Work

Economics

(Macro Economics)

Term -1

Unit Test - 1

Unit 1 Measurement of National Income

Terminal Exam 1

Entire Syllabus concerned in Term I

Entire Macro Economics (Part A)

Unit 1 Measurement of National Income

Unit 2 Determination of Income and Employment

Unit 3 Money and Banking

Unit 4 Government Budget and the Economy Unit 5 Balance of Payments

Term-II (Indian Economic Development)

Unit 6 Development Experience (1947-90) and Economic Reforms since 1991

Unit 7 Current Challenges facing Indian Economy

Unit 8 Development Experience of India-A Comparison with Neighbours

December - IInd Terminal Examination

Entire Syllabus (Macro and Indian Economic Development)

December: Summative Assessment - II

January Pre-Board (Entire Syllabus)

Project work – 20 marks (topics will be allotted by teacher)

Field trip – visit to industrial unit in Ludhiana.

Psychology

Term 1

Ch 1- Variations in Psychological Attributions

Ch 2- Self and Personality

Ch 3- Meeting Life Challenges

Ch 6- Attitude and Social cognition

Ch 7- Social Influence and Group Processes

Practicals- EIS , AISS and MPI

Project file - Case study file

UT 1- Chapter 1,2 and 3

Term 1- Chapters 1,2,3,6 and 7

Term 2-

Ch 4 - Psychological Disorder
Ch 5- Therapeutic Approaches
Ch 8- Psychology and Life
Ch 9- Developing Psychological Skills
Practical - SPM and SAS.
Term 2- Whole syllabus

HOME SCIENCE

CH-1 Work, livelihood and career
Ch-2 Clinical Nutrition and Dietetics
Ch-3 Public Nutrition and Health
Ch -4 Catering and Food Service Management
Ch-5 Food Processing and Technology
Ch-6 Food Quality and food safety
Ch -7 Early childhood Care and Education
Ch-8 Guidance and Counseling
Ch- 9 Special Education and Support Services
Ch -10 Management of Support Services, Institution and Programmes for children, Youth and Elder

Terminal Examination I

CH-11 Design for fabric and Apparel
Ch-12 fashion Design and Merchandising
Ch-13 Production and quality control in the garment industry
Ch-14 Textile Conservation in Museums
Ch-15 Care and Maintenance of fabric in Institution
Ch-16 Human Resource Management
Ch -17 Hospitality Management
Ch-18 Ergonomics and Designing of Interior and Exterior spaces
Ch-19 Event management
Ch -20 Consumer Education and Protection
CH-21 Development Communication and Public Relation
Ch-22 Advocacy
Ch-23 Media management, Design and Production
Ch-24 Corporate communication and Public Relation
Ch-25 Management of Development Programme

Terminal Examination II

Painting

Term I

Unit I

The Rajasthani School

- i) Origin and Development ii) Main features
- iii) Sub schools - Mewar, Bundi, Jodhpur, Bikaner, Kishangarh and Jaipur
- iv) Paintings : a) Maru Ragini, b) Chaugan Players, c) Krishna on swing, d) Radha Bani Thani, e) Bharat meets Rama at Chitrakut

The Pahari School

- i) Origin and Development ii) Main features
- iii) Sub schools - Basohli, Guler, Kangra, Chamba and Garhwal
- iv) Paintings : a) Krishna With Gopis, b) Nand, Yashoda, Krishna going to Vrindavan with kinsmen

Practical :Still Life and Composition

Unit Test I

Unit II

The Mughal School

- i) Origin and Development ii) Main features
- iii) Paintings : a) Krishna lifting Mount Goverdhan, b) Falcon on a bird rest c) Kabir and Raidas, d) Marriage procession of Dara Shikoh

The Deccan School

- i) Origin and Development ii) Main features of the Deccan school
- iii) Paintings : a) Hazrat Nizamuddin Auliya and Amir Khusro b) Chand Bibi Playing Polo

Unit III

The Bengal School of Painting

- i) National Flag of India and Symbolic significance of its form and colours
 - ii) Introduction, Origin and development, Main features of the Bengal School
 - iii) Paintings : a) Journey's End, b) Shiv and Sati, c) Radhika, d) Meghdoot
- Contribution of Indian artists in the struggle for National Freedom Movement

Practical :Still Life and Composition

Term I

The Modern Trends in Indian Art

- i) Paintings : a) Rama Vanquishing the Pride of the Ocean, b) Mother and Child, c) Haldi Grinders, d) Mother Teresa
- ii) Graphic Prints : a) Children, b) Devi, c) Of Walls, d) Man, Woman and Tree
- iii) Sculptures : a) Triumph of Labour, b) Santhal Family, c) Cries Unheard, d) Ganesha

Practical :Still Life and Composition

Term II

Revision of Entire Syllabus

January : Pre Board

Practical

i) Nature and object study ii) Painting composition iii) Portfolio Assessment

For Portfolio (30 sheets) (10 still life, 10 composition , 1 monochrome scheme, 2 Caricature, 2 Folk art, 5 imagination/abstract)

PHYSICAL EDUCATION

Term - I

Unit Test I

Unit-1 Planning in Sports

Unit-2 Sports & Nutrition

Unit-3 Yoga and Life Style

Terminal Examination I

Syllabus of Unit Test I

Unit 4 Physical Education & Sports For (CWSN)

Unit-5 Children & Women in Sports

Physical Activities :

Physical fitness Test

Yogic Practice

Term-II

Unit-6 Test & Measurement in Sports

Unit 7 Physiology and Injuries in sports

Unit-8 Biomechanics and Sports

Terminal Examination II

Syllabus of Unit Test II

Unit 9 Psychology and Sports

Unit-10 Sports Training

Physical Activities :

1. Knowledge about game /sports (Basketball, Football, Kabaddi, Kho Kho, Volleyball, Handball, Hockey, Cricket)

2. Procedure to administrating Senior citizens fitness test.

LEGAL STUDIES

Term I

Unit-1 Judiciary

Unit-3 Arbitration, Tribunal Adjudication and Alternate
Dispute Resolution

Unit Test-1

Unit-2 Topics of Law

Unit-4 Human Rights in India

ACTIVITIES

Visit to district court of Mohali

Interview of any Bar Council Member Or Experienced Advocate

Poster making competition on Fundamental Rights

Terminal Exam I : Entire Syllabus of Term I

Project Work

Term II

Unit-5 Legal Profession in India

Unit-6 Legal Services

Unit-7 International Context

ACTIVITIES

Debate can be an excellent training ground for future lawyers. Debate on different topics of Family Court.

Marriage

Divorce

Adoption

Make a report on most popular Criminal Case of the year in India by using the cuttings of News paper

Terminal Exam II : Entire Syllabus

Computer Science

Term - I

Unit Test-I

Unit-I Computational Thinking and programming-2 (Part 1)

Activity: Collect information on real-life problem for the project

Terminal Examination I

Syllabus of Test-I (Unit Test-I)

Unit-I Computational Thinking and programming-2 (Part 2)

Project: Make a Report file Containing 15 different programs of Python language

Term-II

Unit Test-I

Unit-II Communication Technologies

Activity: Make a project on real-life problem using Python language

Terminal Examination-II

Syllabus of Test-I (Unit Test-II)

Unit-III Database Management

Project: Make a Report file Containing 15 different programs of Python language

POLITICAL SCIENCE

TERM I

PART A

Unit I Cold War Era and Non Aligned Movement

Unit 2 The End Of Bipolarity

Unit 3 United Nation and It's Organizations

PART B

Unit 4 Challenge of Nation Building

Unit 5 Planning and Development

Unit 6 India's Foreign Policy

ACTIIVITIES

Map Activities To Understand World Politics In 1945

Collage On Us Hegemony

Division Of Class Into Two Groups And Discussion On USA And USSR

Terminal Exam I

Project Work

TERM II

PART A

Unit 7 New Centres of Power

Unit 8 South Asia and Contemporary World

Unit 9 Globalization

PART B

Unit 10 Parties and Party System In India

Unit 11 Democratic Resurgence

Unit 12 India Politics Trends and Development

ACTIVITIES

Parliament Session

Debate On The Positive And Negative Impact Of Globalization

Debate On The Necessity Of Emergency 1975

Collage On The Role Of Coalition Of Government In India After 1989
Terminal Exam II