MAHARAJA AGRASEN MODEL SCHOOL

SYLLABUS BREAKUP FOR SESSION: (2025-2026)

CLASS – X

ENGLISH(184)

LANGUAGE AND LITERATURE

Learning Objectives:

At this stage, learners are expected to:
a) Develop an understanding of what they hear in formal and informal settings.
b) Develop an ability to speak fluently and accurately in a variety of situations, meaningfully.
c) Understand the verbal and non-verbal cues used by the speaker.
d) Develop an ability to read with comprehension and not merely decode.

Learning Outcomes at the Secondary Stage:

a) Develop an ability to construct meaning by drawing inferences and relating the texts to previous knowledge.
b) develop the ability to express their thoughts effortlessly, confidently and in an organized manner
c) Write a coherent piece undergoing various stages and processes of writing.
d) Develop imagination, creativity, aesthetic sensibility, and appreciation.
e) Understand the overarching values embedded in the Indian constitution like equality, social justice, equity, and scientific temper; imbibe values and apply them.
f) Respond to contemporary social concerns like violence against women, protection of the environment, etc., and think critically about various issues and concerns.
g) Use language as a skill for real-life purposes.
h) attain a level of proficiency in the English language to meet the workplace requirements.
i) recognize and accept diversity in terms of language and culture
j) be sensitive to people in difficult circumstances, such as children with special needs, elderly people, etc.
k) Realize the uniqueness of Indian culture, heritage, and its contribution to world knowledge.

l) Develop a global perspective on various issues through literature, ICT, media, etc.
m) Develop multilingual competence through using multilingualism as a strategy for learning languages and subjects.
n) develop grammatical competencies, moving from procedural knowledge (from use or meaning) to declarative knowledge

Objectives of Assessment for Listening Skill

To enable learners:
a) Understand a range of genres and contexts of spoken English, including academic, personal, and social aspects.
b) Understand detailed information for a purpose.
c) Understand and interpret a range of features of the given context.
d) Understand the topic and the main points, and also distinguish the main points from the details.

Objectives of Assessment for Speaking Skills
To enable the learners:
a) express and respond to personal feelings and opinions.
b) present oral reports or summaries; narrate incidents or events.
c) present, adopt different strategies to convey ideas according to purpose, topic and audience, and to frame questions so as to elicit desired response.
d) take part in group discussions, summaries ideas, elicit views of others, express and argue a point of view clearly.
e) participate in spontaneous spoken courses.

TEXT BOOKS

1) LITERATURE READER - FIRST FLIGHT

2)SUPPLEMENTARY READER - FOOTPRINTS WITHOUT FEET

3) WORDS AND EXPRESSIONS - WORKBOOK

MONTH WISE SYLLABUS BREAKUP

APRIL:

First Flight-A Letter to God.
Footprints without Feet- A Triumph of Surgery
First flight- Dust of Snow (Poem), Fire and Ice
Letter to the Editor

Letter of Complaint(OFFICIAL and BUSINESS)
Tenses (Grammar)
Words and Expressions: Unit 1&2

MAY

First Flight- Nelson Mandela: A long walk to freedom
A Tiger in the Zoo (Poem)
Subject Verb Concord(Grammar)
Formal Letter
-Letter Placing an Order
-Letter of Enquiry
Words and Expressions: Unit 3, 4 & 7

JULY

Footprints without Feet-The Midnight Visitor
Footprints without Feet- The Thief's Story
Footprints without Feet-Footprints Without Feet
Modals(Grammar)
First Flight- The Ball Poem(Poem)
First Flight-How to tell Wild Animals(Poem)
First Flight-Two Stories about Flying (First Flight &Black Aeroplane)

Words and Expressions: Unit 8 & 9

AUGUST

Integrated Grammar
Reported Speech (Grammar)
First Flight- From the Diary of Anne Frank
First Flight-The Trees (Poem)
Amanda-Poem
Footprints without Feet-A Question of Trust Analytical Paragraph (based on outline/chart/cue/map/report)

SEPTEMBER

First Flight -Glimpses of India
First Flight -The Sermon of Benaras
Words and Expressions: Unit 10 & 11

REVISION FOR MID-TERM EXAMINATIONS OCTOBER

First Flight-—For Anne Gregory (Poem)
First Flight-Mijbil the Otter
First Flight-Fog
Footprints without Feet-Bholi
Footprints without Feet-—The Making of a Scientist

NOVEMBER

First Flight- Madam Rides the Bus
Footprints without Feet-The Necklace
First Flight-Glimpses of India
First Flight -The Proposal
First Flight-The Tale of Custard the Dragon

PRE BOARD-1

DECEMBER

Footprints without Feet-The Book that saved the Earth

PRE BOARD-2

JANUARY :

- Revision

FEBRUARY:

- Revision for Annual Examination
- Problem-Solving Sessions

MARCH: Annual Examination

SYLLABUS FOR PERIODIC TEST 1

Reading comprehension
First Flight-A Letter to God
First Flight-Dust of Snow Tenses

SYLLABUS FOR COMPREHENSIVE EXAM

Reading comprehension

First Flight-A Letter to God, Nelson Mandela: A long walk to freedom
First Flight-Dust of Snow, Fire and Ice
Footprints without Feet- A Triumph of Surgery

Grammar:
Subject Verb Concord, Tenses

Formal Letter
-Letter Placing an Order
-Letter of Enquiry
Letter to the Editor
Letter of Complaint(OFFICIAL and BUSINESS)

SYLLABUS FOR PERIODIC TEST 2

- COMPREHENSION PASSAGE
- Letter to the Editor
- Complaint Letter
- Subject Verb Concord
- First Flight- Nelson Mandela: A Long Walk to Freedom
- A Tiger in the Zoo (Poem)
- Fire and Ice (Poem)
- Footprints without feet- A Thief's Story

SYLLABUS FOR MID TERM:

The entire syllabus covered in Term-1 will be tested in Mid Term Exams

PRE BOARD -1

The entire syllabus covered till the month of November will be tested in Pre Board Exams.

COMPLETE SYLLABUS will be tested in PRE BOARD II

हिंदी कोर्स - बी (कोड - 085)

शिक्षण उद्देश्य

- दैनिक जीवन में हिंदी में समझने-बोलने के साथ-साथ लिखने की क्षमता का विकास |
- औपचारिक विषयों और सन्दर्भों में बातचीत में भाग ले पाने की क्षमता का विकास |
- संचार के विभिन्न माध्यमों में प्रयुक्त हिंदी के विभिन्न रूपों को समझने की योग्यता का विकास|
- कक्षा में बहुभाषिक, बहुसांस्कृतिक सन्दर्भों के प्रति संवेदनशील सकारात्मक सोच बनाना |
- अपनी मातृभाषा और परिवेशगत भाषा को साथ रखकर हिंदी की संरचनाओं की समझ बनाना
- सामाजिक मुद्दों पर समझ बनाना | (जाति, लिंग तथा आर्थिक विषमता)
- कविता, कहानी तथा घटनाओं को रोचक ढंग से लिखना |
- मौखिक एवं लिखित अभिव्यक्ति का विकास

पाठ्यपुस्तकें :-

स्पर्श भाग 2 – एन.सी.ई.आर.टी

संचयन भाग 2 – एन.सी.ई.आर.टी

व्याकरण प्रवेशक - कक्षा X (कोर्स बी) - गीता पब्लिकेशन

अभ्यास हेतु अतिरिक्त पुस्तकें :-

1. Together with हिंदी - बी , Class X, Vimal Sharma, Rachna Sagar Pvt. Ltd.
2. U-Like - मॉडल टेस्ट पेपर्स (अभ्यास कार्य प्रपत्र)

स्पर्श भाग 2 – एन.सी.ई.आर.टी: (लिंक: https://ncert.nic.in/textbook.php?jhsp1=0-17)

संचयन भाग 2 – एन.सी.ई.आर.टी (लिंक: https://ncert.nic.in/textbook.php?jhsy1=0-3)

महीना	**पाठ्यपुस्तक**		**व्याकरण**
अप्रैल तथा मई	स्पर्श - गद्य स्पर्श - पद्य संचयन	बड़े भाई साहब डायरी का एक पन्ना कबीर (साखी) **पद - मीरा** हरिहर काका	पदबंध, अपठित गद्यांश, औपचारिक पत्र, अनुच्छेद, मुहावरे विज्ञापन लेखन
जुलाई	स्पर्श - गद्य स्पर्श - पद्य	तताँरा वामीरो कथा तीसरी कसम के शिल्पकार - शैलेन्द्र मनुष्यता पर्वत प्रदेश में पावस	औपचारिक पत्र, अनुच्छेद, समास, मुहावरे, सूचना लेखन एवं लघु कथा लेखन
अगस्त	स्पर्श **- गद्य** **स्पर्श - पद्य** संचयन	अब कहाँ दूसरों के दुख में दुखी होने वाले तोप सपनों के से दिन	मुहावरे, समास, रचना के आधार पर वाक्य रूपान्तरण एवं लघु कथा लेखन
सितम्बर	स्पर्श - गद्य स्पर्श - पद्य	**पतझर में टूटी पत्तियां** **कर चले हम फ़िदा**	मुहावरे, रचना के आधार पर वाक्य रूपान्तरण एवं ई मेल लेखन
अक्टूबर	स्पर्श - पद्य स्पर्श – गद्य	आत्मत्राण	अभ्यास कार्य - समास, विज्ञापन लेखन , ई - मेल लेखन

		कारतूस	
नवंबर	संचयन **प्री-बोर्ड परीक्षाएं**	टोपी शुक्ला पुनरावृत्ति	मुहावरे, सूचना लेखन,लघु कथा लेखन, पदबंध, समास, वाक्य रूपांतरण अभ्यास एवं पुनरावृति
दिसंबर	पुनरावृति **कार्य** प्री-बोर्ड परीक्षा**एं**		
जनवरी - फरवरी	प्री-बोर्ड परीक्षा**एं**		

सी. बी. एस. ई. पाठ्यक्रम लिंक
(http://cbseacademic.nic.in/web_material/CurriculumMain22/Sec/Hindi_B_Sec_2021-22.pdf)

परीक्षा	पाठ्यपुस्तक		व्याकरण
सामयिक परीक्षा - 1	**स्पर्श - गद्य**	बड़े भाई साहब कबीर (साखी)	अपठित गद्यांश पदबंध , विज्ञापन, मुहावरे
सामयिक परीक्षा – 2	**स्पर्श - गद्य** **स्पर्श - पद्य** **संचयन**	डायरी का एक पन्ना / तताँरा वामीरो कथा मीरा के पद हरिहर काका	अपठित गद्यांश समास, मुहावरे औपचारिक पत्र एवं सूचना लेखन
अर्धवार्षिक परीक्षा	**स्पर्श - गद्य** **स्पर्श - पद्य** **संचयन**	बड़े भाई साहब डायरी का एक पन्ना तताँरा वामीरो कथा तीसरी कसम के शिल्पकार - शैलेन्द्र कबीर (साखी) मीरा के पद मनुष्यता पर्वत प्रदेश में पावस हरिहर काका सपनों के से दिन	अपठित गद्यांश पदबंध, मुहावरे, समास , वाक्य रूपांतरण औपचारिक पत्र लेखन अनुच्छेद लेखन लघु कथा लेखन विज्ञापन सूचना ई मेल लेखन

व्यापक परीक्षा **Comprehensive Exam**	**स्पर्श - गद्य** **स्पर्श - पद्य** **संचयन**	**बड़े भाई साहब** **डायरी का एक पन्ना** **साखी - कबीर** **मीरा के पद** **हरिहर काका**	अपठित गद्यांश मुहावरे, **समास,** अनुच्छेद, **औपचारिक पत्र** सूचना, विज्ञापन , लघुकथा और ई मेल लेखन
वार्षिक परीक्षा	सम्पूर्ण पाठ्यक्रम		

SANSKRIT

महाराजा अग्रसेन मॉडल स्कूल

सत्र 2025 -2026

कक्षा दशमी

संस्कृत (119)

पाठ्यक्रम (Monthwise)
संस्कृत भाषा शिक्षण के उद्देश्य

- **भाषा कौशल का विकास**
- **नैतिक मूल्यों का विकास**
- **संस्कृत भाषा तथा उसके साहित्य का संरक्षण करना**
- **संस्कृत भाषा को पढ़ने के लिए प्रोत्साहित करना तथा उसका विकास करना**

पाठ्यपुस्तक - मणिका- २ (NCERT)
अभ्यासवान् पुस्तकम् २ (NCERT)
अभ्यास हेतु अतिरिक्त पुस्तकें

1. Together with Sanskrit (Rachna Sagar)
2. U-Like - मॉडल टेस्ट पेपर्स (अभ्यास कार्य प्रपत्र)
3. Full Marks Sanskrit (Full Circle Education)

https://ncert.nic.in/textbook.php
http://www.cbseacademic.nic.in/Revisedcurriculum_2021.html
अप्रैल
मणिका भाग-२

- पाठ -१ वाङमयं तपः
- पाठ -२ **नास्ति त्यागसमुं सुखं**

अभ्यास पुस्तकम् २

- चित्रवर्णनम्
- संधि
- प्रत्यय
- औपचारिक पत्र

मई
मणिका पाठ ३ - रमणीय ही सृष्टि एष:

- पाठ ४ - आज्ञा गुरूणाम् हि अविचारणीया

अभ्यासवान् भव-२

- प्रत्यय
- वाच्य
- समास

जुलाई
मणिका भाग-२

- पाठ -५ अभ्यासवाशगं मनः

- पाठ- ६ राष्ट्र संरक्षमेव ही

अभ्यासवान् भव-२

- समास
- प्रत्यय
- पत्रलेखनम्
- चित्रवर्णनम्

अगस्त

- पाठ-५,६ पुनरावृत्ति
- प्रत्यय, समास, वाच्य, अव्यय, समय(पुनरावृत्ति)
- पत्रलेखनम्, अशुद्धि संशोधनम् , अनुवाद
- पाठ -७ **साधुवृति समाचारेत**

सितंबर

- पाठ **-८** तिरुकुलं सूक्ति सौरभं
- समास
- अशुद्धि संशोधनम् , अनुवाद , चित्रवर्णनम्

अक्टूबर

- पाठ**- ९ सुस्वागतम भो ! अरुणाचलोअस्मिन**
- पाठ - १० कलोअहं (परिशिष्ट भाग)
- समास, संधिः
- अनुवाद, अपठित गद्यांश

नवंबर

- चित्रवर्णनम्, पत्रलेखनम्, अशुद्धि संशोधनम् , अनुवाद
- प्रत्यय, समास, वाच्य, अव्यय, समय , संधिः
- पाठ ११ - किम किम उपदेयम (परिशिष्ट भाग)

दिसंबर

पुनरावृत्ति-

- पत्रलेखनम्
- चित्रवर्णनम्
- अनुवाद, अपठित गद्यांश
- अशुद्धि संशोधनम्

जनवरी

पूर्व परिषद् परीक्षा- प्री-बोर्ड परीक्षा**एं**

फ़रवरी

पाठ्यक्रम पुनरावृत्ति **एवं** प्री-बोर्ड परीक्षा**एं**

सामयिक परीक्षा 1 -

मणिका भाग-२

- पाठ -१ वाङंमयं तपः
- पाठ -२ **नास्ति त्यागसमुं सुखं**
- पाठ ३ - रमणीय ही सृष्टि एषः

अभ्यासवान् भव-२

- प्रत्यय
- वाच्य
- समास
- समयः
- अव्यय

पत्रलेखनम् , अपठित गद्यांश

सामयिक परीक्षा- 2

मणिका भाग-२

- पाठ ४ - आज्ञा गुरूणाम् हि अविचारणीया
- पाठ -५ अभ्यासवाशगं मनः
- पाठ- ६ राष्ट्र संरक्षमेव ही

अभ्यासवान् भव-२

- प्रत्यय
- वाच्य
- समास
- समयः
- अव्यय

पत्रलेखनम् , अपठित गद्यांश

अर्द्धवार्षिक परीक्षा

अपठित गद्यांश
चित्र वर्णन
पत्र लेखन
संवाद लेखन
संख्या
समय
अव्यय
संधि

समास
प्रत्यय
वाच्य

- पाठ -२ **नास्ति त्यागसमुं सुखं**
- पाठ ३ - रमणीय ही सृष्टि एष:
- पाठ -५ अभ्यासवाशगं मनः
- पाठ- ६ राष्ट्र संरक्षमेव ही

व्यापक परीक्षा(comprehensive exam)
अपठित गद्यांश
चित्र वर्णन
पत्र लेखन
संवाद लेखन
संख्या
समय
अव्यय
संधि
समास
प्रत्यय (कटवा , तुमुन ,ल्यप , टाप , गीप , ठक)
वाच्य परिवर्तन

- पाठ -५ अभ्यासवाशगं मनः
- पाठ- ६ राष्ट्र संरक्षमेव ही
- पाठ -७ **साधुवृति समाचारेत**
- पाठ **-८** तिरुकुलं सूक्ति सौरभं
- पाठ- **९ सुस्वागतम भो ! अरुणाचलोअस्मिन**
- पाठ - १० कलोअहं (परिशिष्ट भाग)
- अशुद्धि संशोधनम् , अनुवाद

वार्षिक परीक्षा- सम्पूर्णपाठ्यक्रम

वार्षिकं मूल्यांकनम्
क खंडः

1 अपठित-अवबोधनम्- 10 अंकाः

ख खंडः

रचनात्मकं कार्यम्- 15 अंकाः

2 पत्र लेखनम्- 5

3 चित्र वर्णन- 5

4 संवादपूर्ति 5

ग खंडः-

अनुप्रयुक्तव्याकरणम्-25 अंकाः

5 संधि कार्यम्- 4अंकाः

6-समासः - 4अंकाः

7 -प्रत्ययाः- -4अंकाः

8 -वाच्यपरिवर्तनम् - 3अंकाः

9 -समयः – 4- अंकाः

10-अव्ययपदानि– 3अंकाः

11-संशोधनकार्यम्- - 3अंकाः

घ खंडः

पठितअवबोधनम्- 30 अंकाः

12-गद्यांशः- 5अंकाः

13- पद्यांशः- 5अंकाः

14- नाट्यांशः- 5अंकाः

15- प्रश्ननिर्माणम्- 4 अंकाः

16- अन्वयः- 4 अंकाः

17-घटनाक्रमानुसारं वाक्यलेखनम्- 4अंकाः

18- पर्यायपदानां विलोमपदानां वा मेलनम्- 3 अंकाः

सम्पूर्णभारः 80

MATHEMATICS. (041,241)

OBJECTIVES:

The broad objectives of teaching of Mathematics at secondary stage are to help the learners to:

- Consolidate the Mathematical knowledge and skills acquired at the upper primary stage.

- Acquire knowledge and understanding, particularly by way of motivation and visualization, of basic concepts, terms, principles and symbols and underlying processes and skills.
- Develop mastery of basic algebraic skills.
- Develop drawing skills.
- Feel the flow of reason while proving and solving a problem.
- Apply the knowledge and skills acquired to solve problems and wherever possible, by more than one method.
- Develop a positive ability to think, analyze and articulate logically.
- Develop awareness of the need for national integration, protection of environment, observance of small family norms, removal of social barriers, elimination of gender biases.
- Develop necessary skills to work with modern technological devices such as calculators, computers, etc.
- Develop interest in mathematics as a problem-solving tool in various fields for its beautiful structures and patterns, etc.
- Develop reverence and respect towards great Mathematicians for their contributions to the field of Mathematics.
- Develop interest in the subject by participating in related competitions.
- Acquaint students with different aspects of Mathematics used in daily life.
- Develop an interest in students to study Mathematics as a discipline.

TEXTBOOK:

NCERT Mathematics Textbook for class X
https://ncert.nic.in/textbook/pdf/jemh1cc.jpg

REFERENCE BOOKS:

NCERT MATHEMATICS EXEMPLAR PROBLEMS CLASS X

E-REFERENCE :

1. http://www.cbseacademic.nic.in/curriculum_2022.html#collapse2
2. https://ncert.nic.in/textbook.php
3. Diksha app resource

APRIL

CHAPTER 1-Real Numbers

- Introduction
- The fundamental Theorem Of Arithmetic
- Revisiting Irrational Numbers
- Proofs of $\sqrt{2}, \sqrt{3}$,$\sqrt{5}$
- Summary

LEARNING OUTCOMES:

The students will be able to

- Calculate HCF. & LCM using prime factorization.
- Use a contradiction method for proving a statement.
- Solve problems on division algorithms.
- Apply the H.C.F. & L.C.M. in real life situations.

Lab Activity 2

CHAPTER-3.Pair of Linear Equations in Two Variables

- Introduction of a pair of Linear Equations In two Variables
- Graphical Method of Solution of a Pair of Linear Equations
- Algebraic methods of Solving a Pair of Linear Equations.
- Summary

LEARNING OUTCOMES:

The student will be able to

- Solve the pair of linear equations by graphical and algebraic methods.
- Apply the concept of solving linear equations to solve real life situations.

Lab Activity 1

MAY

CHAPTER -2. Polynomials

- Introduction
- Geometrical Meaning of the Zeroes of a Polynomial.
- Relationship between Zeroes and Coefficients of a Quadratic Polynomial.
- Summary

LEARNING OUTCOMES:

The students will be able to Find the zeroes of a given polynomial graphically and algebraically.

- Establish the relationship between the zeros of a quadratic polynomial and its coefficients.

CHAPTER 4-Quadratic Equations

- Introduction
- Quadratic Equations
- Solution of Quadratic Equation by Factorization
- Solution of Quadratic Equation by quadratic formula.
- Simple problems based on equations reducible to quadratic form.
- Summary

LEARNING OUTCOMES:

The student will be able to solve the quadratic equation by different methods and apply in varied situations.

CHAPTER 14-Probability

- Introduction
- Probability-Theoretical Approach
- Sample space of different experiments like 2 dice, 3 coins, deck of cards .
- Summary

LEARNING OUTCOMES:

The student will be able to understand the concept of theoretical probability of different events.

Lab Activity 10

JULY

CHAPTER6-Triangles

- Introduction
- Similar Figures
- Similarity Of Triangles
- Criteria for Similarity of Triangles
- Summary

LEARNING OUTCOMES:

The student will be able to:

- Recall similar figures and identify them.
- Recognize various rules to show two triangles similar.

Lab Activity 3,4

CHAPTER 8-Introduction to Trigonometry

- Introduction
- Trigonometric Ratios
- Trigonometric Ratios of Some Specific Angles
- Proofs of Trigonometric ratios at 0,30,45,60 and 90 degrees.
- Trigonometric Identities
- Summary

LEARNING OUTCOMES:

The student will be able to:

- Appreciate the relationship between acute angle and ratio of sides of a right triangle.
- Acquainted with the concept of Trigonometric ratios & its Identities.

AUGUST

CHAPTER 11-Areas Related to Circles

- Introduction
- Perimeter and Area of Circle-A Review
- Areas of Sector and Segment of a Circle
- Areas of Combination of Plane Figures
- Summary

LEARNING OUTCOMES:

The student will be able to use the concept of area & perimeter of plane figures in given problems.

Lab Manual Activity 5

SEPTEMBER

Revision for Mid Term Examination.

CHAPTER 10-Circles

- Introduction
- Tangent to a Circle
- Number of Tangents from a Point on a Circle
- Summary

LEARNING OUTCOMES:

The student will be able to use concept of tangent to circles in solving given problems

Lab Manual Activity 8

OCTOBER

CHAPTER 9-Some Applications of Trigonometry

- Introduction
- Heights and Distances
- Summary

LEARNING OUTCOMES:

The student will be able to:

- Use the concept of trigonometric ratios & its identities to solve given problems.
- Apply the concept of trigonometry in finding heights & distances in day to day life

CHAPTER 5-Arithmetic Progressions

- Introduction of Arithmetic Progressions
- nth term of an AP
- Sum of n terms of an AP
- Summary

LEARNING OUTCOMES:

The student will be able to:

- Understand the concept of sequence/patterns and A.P. as a special sequence.
- Use the concept nth term of an A.P. in solving problems.
- Find sum of n terms of an A.P.and apply in varied situations.

Lab Manual Activity 6

NOVEMBER

CHAPTER 7-Coordinate Geometry

- Introduction
- Distance Formula
- Section Formula.
- Summary

LEARNING OUTCOMES:

The student will be able to

- Familiarize themselves with the coordinate plane.
- Find the distance between two points.
- Find coordinates of a point given two points in a plane in a given ratio.
- Use the concepts in day to day life situations.

CHAPTER 13-STATISTICS

- Mean of Grouped Data
- Mode of Grouped Data
- Median of Grouped Data
- Empirical Relationship
- Summary

LEARNING OUTCOMES:

The student will be able to:

- Organize, represent & interpret the data by using mean and mode.
- Make graphical representation of data such as Ogive interpret median from it.
- Interpret and analyze given data by using Mean and Mode.

Lab Manual Activity 7

DECEMBER

CHAPTER 12-Surface Area and Volumes

- Introduction
- Surface Area of a Combination of Solids
- Volume of a Combination of Solids
- Summary

LEARNING OUTCOMES:

The student will be able to

- Find the surface area & volume of a combination of solid figures.
- Apply the concept of volume of solid figures in new situations.

Lab Activity 9

JANUARY

Revision of whole syllabus

FEBRUARY

PRE BOARDS

EXAMWISE SYLLABUS BREAK UP:

PERIODIC TEST 1

1. CHAPTER-1 Real Numbers

PERIODIC TEST 2

1. CHAPTER-2 (Polynomials)
2. CHAPTER-3 (Pair of linear equations).

COMPREHENSIVE EXAM

Syllabus covered till May , 2025

MIDTERM EXAMINATION

1. CHAPTER-1 (Real Numbers)
2. CHAPTER-2 (Polynomials)
3. CHAPTER-3 (Pair of Linear Equations)
4. CHAPTER-8 (Introduction to Trigonometry)
5. CHAPTER-6 (Triangles)
6. CHAPTER-14(Probability)
7. CHAPTER- 11(Areas related to circles)
8. CHAPTER 4-Quadratic Equations

PRE BOARD 1 EXAMINATION

1.CHAPTER-1 (Real Numbers)

2. CHAPTER-2 (Polynomials)

3.CHAPTER-3 (Pair of Linear Equations)

4. CHAPTER-4 (Quadratic Equations)

5. CHAPTER-5 (Arithmetic Progression)
6. CHAPTER-6 (Triangles)

7. CHAPTER-7 (Coordinate Geometry)
8. CHAPTER-8 (Introduction to Trigonometry)
9. CHAPTER-9 (Application of Trigonometry.
10. CHAPTER-14(Probability)
11. CHAPTER-10(Circles)
12. CHAPTER-11 (Areas Related To Circles).
13. CHAPTER 13 (Mean and Mode)

PRE BOARD 2 EXAMINATION : WHOLE SYLLABUS

SCIENCE (086)

COURSE BOOK :

1. Science - Textbook for class X - NCERT Publication
REFERENCE BOOKS
1. Exam Idea (Science)
2. Science for Tenth Class
Part 1 Physics
Part 2 Chemistry
Part 3 Biology by Lakhmir Singh and Manjit Kaur

Science is a body of knowledge based on experiment, observation and inference, which is judgment based on evidence. Through science teaching, children are required to develop certain scientific ways of thinking as they work. The subject of science plays an important role in developing well-defined abilities in cognitive, affective and psychomotor domains in children. It augments the spirit of enquiry, creativity, objectivity and aesthetic sensibility.

OBJECTIVES

Science teaching aims to realize the following general objectives. It enables the learners to

• know the facts and principles of science and its applications, consistent with the stage of cognitive development.

• acquire the skills and understand the methods and processes that lead to generation and validation of scientific knowledge.

• develop intellectual and practical scientific skills.

• motivate to apply basic scientific principles in all sciences.
• acquire knowledge about health, environment and safety practices and behave accordingly.

Learning Outcomes

The learner—

• differentiates materials, objects, organisms, phenomena, and processes, based on properties and characteristics.
• classifies materials, objects, organisms, phenomena, and processes, based on properties and characteristics.
• plans and conducts investigations and experiments to arrive at and verify the facts, principles, phenomena, or to seek answers.
•relates processes and phenomena with causes and effects, such as, hormones with their functions, tooth decay with pH of saliva, growth of plants with pH of the soil, survival of aquatic life with pH of water, blue colour of sky with scattering of light, deflection of compass needle due to magnetic effect of electric current, etc.
• explains processes and phenomena, such as, nutrition in human beings and plants, transportation in plants
• draws labeled diagrams, flow charts, concept maps, and graphs, such as, digestive, respiratory, circulatory, excretory, and reproductive system.

electrolysis of water, electron dot structure of atoms and molecules, flow chart for extraction of metals from ores, ray diagrams, magnetic field lines, etc.

• analysis and interprets data, graphs, and figures, such as, melting and boiling points of substances to differentiate between covalent and ionic compounds, pH of solutions to predict the nature of substances, V-I graphs, ray diagrams, etc.
• calculates using the data given, such as, number of atoms in reactants and products to balance a chemical equation, resistance of a system of resistors, power of a lens, electric power, etc.
• uses scientific conventions to represent units of various quantities, symbols, formulae, and equations, such as, balanced chemical equation

by using symbols and physical states of substances, sign convention in optics, SI units, etc.

● handles tools and laboratory apparatus properly; measures physical quantities using appropriate apparatus, instruments, and devices, such as, pH of substances using pH paper, electric current and potential difference using ammeter

● applies learning to hypothetical situations.

● applies scientific concepts in daily life and solving problems.

● derives formulae, equations, and laws, such as, equivalent resistance of resistors in series and parallel, etc.

● draws conclusion, such as, traits or features are inherited through genes present on chromosomes.

● exhibits values of honesty, objectivity, rational thinking, and freedom from myth and superstitious beliefs while taking decisions, respect for life, etc.

● communicates the findings and conclusions effectively, such as, those derived from experiments, activities, and projects orally and in written form using appropriate figures, tables, graphs, and digital forms, etc.

● makes efforts to conserve the environment.

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UNIT WISE DISTRIBUTION OF MARKS

COURSE STRUCTURE
CLASS X
(Annual Examination)

Marks: 80

Unit No.	Unit	Marks
I	Chemical Substances-Nature and Behaviour	25
II	World of Living	25
III	Natural Phenomena	12
IV	Effects of Current	13
V	Natural Resources	05
	Total	**80**
	Internal assessment	**20**
	Grand Total	**100**

MONTHWISE SYLLABUS BREAKUP

APRIL

PHYSICS

Chapter 9 : Light - Reflection of Light and Refraction

Reflection of light at curved surfaces, Images formed by spherical mirrors, centre of curvature,Principal axis, principal focus, focal length. Mirror Formula (Derivation not required),Magnification

CHEMISTRY

Chapter 1 : Chemical Reactions and Equations

Chemical reactions: Chemical equation, Balanced chemical equation, implications of a balanced chemical equation, types of chemical reactions: combination, decomposition, displacement, double displacement, precipitation, neutralization, oxidation and reduction.

BIOLOGY

CHAPTER 5: LIFE PROCESSES

Life processes: 'Living Being'. Basic concept of nutrition in plants, Life processes: 'Living Being'. Basic concept of nutrition in animals, and respiration in plants and animals.

Practical

1.Preparing a temporary mount of a leaf peel to show stomata.

MAY

PHYSICS

Chapter 9 : Light - Reflection of Light and Refraction (Cond…)

Reflection of light at curved surfaces, Images formed by spherical mirrors. Laws of refraction, refractive index. Refraction of light by spherical lens. Image formed by spherical lenses; Lens formula (Derivation not required); Magnification. Power of a lens

Practical:

Determination of the focal length of: i) Concave mirror ii) Convex lens by obtaining the image of a distant object.

CHEMISTRY

Chapter 2 : Acids, Bases and Salts

Definitions of acids and bases in terms of furnishing of H + and OH - ions, General properties, examples and uses, concept of pH scale (Definition relating to logarithm not required), importance of pH in everyday life. preparation and uses of Sodium Hydroxide, bleaching powder, baking soda, Washing soda and Plaster of Paris.

Practical

1. A. Finding the pH of the following samples by using pH paper/universal indicator: (i) Dilute Hydrochloric Acid (ii) Dilute NaOH solution (iii) Dilute

Ethanoic Acid solution (iv) Lemon juice (v) Water (vi) Dilute Hydrogen Carbonate solution

B. Studying the properties of acids and bases (HCl & NaOH) on the basis of their reaction with: a) Litmus solution (Blue/Red) b) Zinc metal c) Solid sodium carbonate

BIOLOGY

CHAPTER 5 LIFE PROCESSES (contd…)

Life processes: 'Living Being'. Basic concept of transportation in plants and animals.

Practical

1. Preparing a temporary mount of a leaf peel to show stomata.

JULY

PHYSICS

Chapter 10: The Human Eye and the Colourful World

Functioning of a lens in the human eye, defects of vision and their corrections, applications of spherical mirrors and lenses. Refraction of light through a prism, dispersion of light.

Practical

Tracing the path of a ray of light passing through a rectangular glass slab for different angles of incidence. Measure the angle of incidence, angle of refraction, angle of emergence and interpret the result.

CHEMISTRY

Chapter 3: Metals and Non-Metals

Properties of metals and non-metals; Reactivity series; Formation and properties of ionic compounds; Basic metallurgical processes; Corrosion and its prevention.

Practical

1. A. Finding the pH of the following samples by using pH paper/universal indicator: (i) Dilute Hydrochloric Acid (ii) Dilute NaOH solution (iii) Dilute Ethanoic Acid solution (iv) Lemon juice (v) Water (vi) Dilute Hydrogen Carbonate solution

B. Studying the properties of acids and bases (HCl & NaOH) on the basis of their reaction with: a) Litmus solution (Blue/Red) b) Zinc metal c) Solid sodium carbonate

BIOLOGY

CHAPTER 5 LIFE PROCESSES (cont….)

Life processes: 'Living Being'. Basic concept of excretion in plants and animals.

CHAPTER 6 CONTROL AND COORDINATION

Control and coordination in animals and plants: Tropic movements in plants; Introduction of plant hormones.

Practical

1.Preparing a temporary mount of a leaf peel to show stomata.

AUGUST

PHYSICS

Chapter 10:The Human Eye and the Colourful World (contd…)

scattering of light, applications in daily life (excluding colour of the sun at sunrise and sunset).

Practical: Tracing the path of the rays of light through a glass prism

CHEMISTRY

Chapter 3: Metals and Non-Metals (Continued)

Practical

2. Performing and observing the following reactions and classifying them into: Combination reaction B. Decomposition reaction C. Displacement reaction D. Double displacement reaction (i) Action of water on quicklime (ii) Action of heat on ferrous sulphate crystals (iii) Iron nails kept in copper sulphate solution (iv) Reaction between sodium sulphate and barium chloride solutions 3.Observing the action of Zn, Fe, Cu and Al metals on the following salt solutions: i) ZnSO4(aq) ii) FeSO4(aq) iii) CuSO4(aq) iv) Al2 (SO4)3(aq) Arranging Zn, Fe, Cu and Al (metals) in the decreasing order of reactivity based on the above result.

BIOLOGY

CHAPTER 6 CONTROL AND COORDINATION (contd…)

Control and coordination in animals: Nervous system; Voluntary, involuntary and reflex action; Chemical coordination: animal hormones.

Practical

2. Experimentally show that carbon dioxide is given out during respiration.

SEPTEMBER

PHYSICS

Chapter 11: Electricity

Electric current, potential difference, Electric current, Ohm's law, Resistance, Resistivity. Factors on which the resistance of a conductor depends.

Practical: Studying the dependence of potential difference (V) across a resistor on the current (I) passing through it and determine its resistance. Also plotting a graph between V and I.

CHEMISTRY

Chapter4: Carbon and its compounds

Covalent bonding in carbon compounds. Versatile nature of carbon. Homologous series. Nomenclature of carbon compounds containing functional groups (halogens, alcohol, ketones, aldehydes, alkanes and alkynes), difference between saturated hydrocarbons and unsaturated hydrocarbons.

Chemical properties of carbon compounds (combustion, oxidation, addition and substitution reaction). Ethanol and Ethanoic acid (only properties and uses), soaps and detergents.

BIOLOGY

CHAPTER 7 HOW DO ORGANISMS REPRODUCE?

Reproduction: Reproduction in animals and plants (asexual and sexual), Sexual reproduction in animals.

Practical

3.Studying (a) binary fission in Amoeba, and (b) budding in yeast and Hydra with the help of prepared slides.

OCTOBER

PHYSICS

Chapter 11: Electricity 9 (contd…)

Series combination of resistors, parallel combination of resistors and its applications in daily life, heating effect of current and its application in daily life. Electric power, inter-relation between P,V,I.

Practical

Studying the dependence of potential difference (V) across a resistor on the current (I) passing through it and determine its resistance. Also plotting a graph between V and I.

CHEMISTRY

Chapter4: Carbon and its compounds (Continued)

Practical

4. Study of the following properties of acetic acid (ethanoic acid): Unit- I i) Odour ii) solubility in water iii) effect on litmus iv) reaction with Sodium Hydrogen Carbonate

BIOLOGY

CHAPTER 7 HOW DO ORGANISMS REPRODUCE? (contd…)

Reproductive health needs and methods of family planning. Safe sex vs HIV/AIDS. Childbearing and women's health.

Practical

3.Studying (a) binary fission in Amoeba, and (b) budding in yeast and Hydra with the help of prepared slides.

NOVEMBER

PHYSICS

Chapter. 12: Magnetic effects of Current

Magnetic field, field lines, field due to a current carrying conductor, field due to current carrying coil or solenoid; Force on current carrying conductor, Fleming's left-hand rule.

Practical
Determination of the equivalent resistance of two resistors when connected in series.
CHEMISTRY
Chapter4: Carbon and its compounds (Continued)
Practical
5.To study of the comparative cleaning capacity of a sample of soap in soft and hard water
BIOLOGY
CHAPTER 8 HEREDITY
Heredity: Heredity; Mendel's contribution- Laws for inheritance of traits: Sex determination: brief introduction.
Practical
4.Identification of the different parts of an embryo of a dicot seed (Pea, gram or red kidney bean).

DECEMBER
PHYSICS
Chapter. 12: Magnetic effects of Current contd...

Direct current. Alternating current: frequency of AC. Advantage of AC over DC. Domestic electric circuits.
Practical
Determination of the equivalent resistance of two resistors when connected in parallel.
CHEMISTRY
Revision
BIOLOGY
CHAPTER 13 OUR ENVIRONMENT
Our environment: Eco-system, Environmental problems, Ozone depletion, waste production and their solutions. Biodegradable and non-biodegradable substances.
Revision for Board Examination

JANUARY
Revision for Board Examination

FEBRUARY
Revision for Board Examination
MARCH BOARD EXAMS
EXAMWISE SYLLABUS BREAKUP

PERIODIC TEST I

Chapter 1: Chemical Reactions and Equations

Chapter 5: Life Processes
Chapter 9: Light: Reflection and Refraction

PERIODIC TEST II

Chapter 2 : Acids, Bases and Salts
Chapter 6: Control and Coordination
Chapter 10: Human Eye and its colourful world

COMPREHENSIVE EXAM

Chapter 1: Chemical Reactions and Equations
Chapter 2 : Acids, Bases and Salts
Chapter 9: Light: Reflection and Refraction
Chapter 5: Life Processes

MID TERM EXAM

Chapter 1: Chemical Reactions and Equations
Chapter 2 : Acids, Bases and Salts
Chapter 3 : Metals and Non-Metals
Chapter 5: Life Processes
Chapter 6: Control and Coordination
Chapter 9: Light:Reflection and Refraction
Chapter 10:Human Eye and its colourful world

PREBOARD I EXAM

Chapter 1 : Chemical Reactions and Equations
Chapter 2 : Acids, Bases and Salts
Chapter 3 : Metals and Non-Metals
Chapter 4: Carbon and its compounds
Chapter 5: Life Processes
Chapter 6: Control and Coordination
Chapter 7: How do organisms reproduce?
Chapter 8: Heredity
Chapter 9: Light
Chapter 10: Human Eye and its colourful world
Chapter 11: Electricity

PREBOARD II EXAM

Chapter 1 : Chemical Reactions and Equations
Chapter 2 : Acids, Bases and Salts
Chapter 3 : Metals and Non-Metals

Chapter 4: Carbon and its compounds
Chapter 5: Life Processes
Chapter 6: Control and Coordination
Chapter 7: How do organisms reproduce?
Chapter 8: Heredity
Chapter 9: Light
Chapter 10: Human Eye
Chapter 11: Electricity
Chapter 12 : Magnetic effects of current
Chapter 13: Our Environment

SOCIAL SCIENCE

(Code No. 087)

Objectives:

1. To develop an understanding of the processes of change and development both in terms of time and space through which human societies have evolved.

2. To make learner's realise that the process of change is continuous and any event of phenomena or issue cannot be viewed in isolation but in a wider context of time and space.

3. To facilitate the learners to understand and appreciate the diversity in the land and people of the country with its underlying Unity.

4. To promote and understanding of the issues and challenges of contemporary India environmental social and economic as part of the development process.

Learning outcomes:

- **recognizes and retrieves facts, figures, and narrate, processes, for example,**

  a) identifies different types of soil, minerals, renewable and non-renewable energy resources, etc.

b) locates areas or regions known for production of coal, iron ore, petroleum, rice, wheat, tea, coffee, rubber, and cotton textile on the map of India.

c)defines basic Economic terms associated with economic development such as, human capital, sustainable development, gross domestic product, gross value added, per capita income, human development index, multinational company, foreign trade, liberalisation and foreign investment.

- **classifies and compares events, facts, data and figures, for example,**

  a) compares per capita income of some important countries.

  b) differentiates consumer rights.

  c)classifies occupations and economic activities into sectors using different criteria.

  d)explains the terms used in political discussions and their meaning, for example, Gandhian, communist, secularist, feminist, casteist, communalist, etc.

- **explains cause and effect relationship between phenomena, events, and their occurrence, for example,**

  a) explains factors responsible for production of different crops in India.

  b) explains industries and their impact on environment.

  c) explains the cause and effect between different historical events and developments such as, the impact of print culture on the growth of nationalism in India.

  d)examines the impact of technology on food availability.

NCERT Textbooks:

India and the contemporary world -II

Contemporary India-II

Democratic politics-II

Understanding economic development-II

Reference Book:

eXam Idea- V.K Global Publications Pvt. Ltd.

E-references:

https://ncert.nic.in/textbook.php?iess1=4-6

http://cbseacademic.nic.in/curriculum_2022.html

MONTHWISE SYLLABUS BREAKUP

APRIL

History: Chapter 1- The Rise of Nationalism in Europe (Contd.)
Civics: Chapter 1- Power sharing
Economics : Chapter 1- Story of development
Geography: Chapter 1- Resources and development

MAY

History: Chapter 1- The Rise of Nationalism in Europe
Civics: Chapter-2-Federalism
Economics- Chapter-2- Sectors of Indian economy
Geography : Chapter 1- Resources and development (Contd.)
Chapter 2- Forest and Wildlife resources

JULY

History: Chapter 2- Nationalism in India.
Civics: Chapter—4-Gender,Religion and Caste.
Geography : Chapter 3 - Water Resources

AUGUST

History: Chapter 3- The Making of a Global World.
Geography: Chapter 4 - Agriculture
Economics: Chapter -3-Money and Credit
Civics:- Chapter-4- Gender , Religion and Caste (contd.)

SEPTEMBER

History: Chapter 4- The age of Industrialization
Civics: Chapter-6- Political Parties
Economics: Chapter 4- Globalization
Geography: Chapter 4 - Agriculture (Contd.)

Chapter -5 Mineral and Energy resources

OCTOBER

History: Chapter 4- The age of Industrialization
Civics: Chapter 6 - Political Parties
Economics: Chapter-4- Globalization (Contd.)
Geography : Chapter -5 Mineral and Energy resources(Contd.)
Chapter 6 -Manufacturing Industries

NOVEMBER

History: Chapter 5- The Print Culture
Civics: Chapter 7- Outcomes of democracy
Geography : Chapter 6 -Manufacturing Industries(Contd.)

December

History: Chapter 5- The Print Culture
Geography : Chapter 6 -Manufacturing Industries(Contd.)
Civics Chapter-6**-**Outcomes of democracy

J**anuary**

History: Chapter 5- The Print Culture
Geography : Chapter 6 -Manufacturing Industries(Contd.)
Civics-Chapter-6 Outcomes of democracy
Periodic Test 1:
History : Chapter 1- The Rise of Nationalism in Europe
Civics : Chapter 1 -Power sharing
Economics : Chapter 1- Story of development
Geography : Chapter 1- Resources and development

Comprehensive Examination :

History : Chapter 1- The Rise of Nationalism in Europe
Civics : Chapter-1 and Chaper-2
Economics : Chapter 1- and Chapter-2
Geography : Chapter 1- Resources and development

Periodic Test 2

History: Chapter 2- Nationalism in India.
Civics :Chapter 4- Gender ,Caste ,Religion
Economics :Chapter 3- Money and Credit
Geography : Chapter 2 - Forest and Wildlife Resources

Mid Term Examination

History: Chapter-1,2,3
Civics : Chapter-1,2,4,5
Economics : Chapter-1,2,3
Geography : Chapter -1,2,3,4

Pre Board -I

History:Entire syllabus

Civics : Entire syllabus

Economics : Entire syllabus

Geography : Entire syllabus

Pre Board - II

Entire syllabus

ARTIFICIAL INTELLIGENCE (SUB. CODE 417)

LEARNING OBJECTIVES :

1. To help learners understand the world of Artificial Intelligence and its applications through games, activities, and multi-sensory learning to become AI-ready.
2. To introduce the learners to the three domains of AI in an age-appropriate manner.
3. To allow the learners to construct the meaning of AI through interactive participation and engaging hands-on activities.

4. To introduce the learners to programming skills - Basic python coding language.

LEARNING OUTCOMES:

- Recognize and value artificial intelligence (AI) in everyday life.
- Apply Human-Machine interaction principles across AI domains: Data, Computer Vision, and Natural Language Processing, with ongoing self-assessment.
- Reflect on and prepare for future job opportunities, considering emerging skill requirements.
- Engage in creative storytelling around smart home concepts, fostering imagination.
- Understand AI's role in Sustainable Development Goals for responsible citizenship.
- Research and cultivate awareness of future job skills.
- Acknowledge AI bias, access, and ethical considerations.
- Cultivate effective communication and collaboration skills.
- Familiarize with AI concepts and project cycles, fostering motivation.
- Learn problem scoping, goal-setting, and ethical brainstorming in AI projects, with iterative problem-solving approaches.

Text Book : CBSE TEXT BOOK

Total Marks: 100 (Theory-50 + Practical-50)

	UNITS	**MAX. MARKS for Theory and Practical**
PART - A	**Employability Skills**	
	Unit 1: Communication Skills-II	2
	Unit 2: Self-Management Skills-II	2
	Unit 3: ICT Skills-II	2
	Unit 4: Entrepreneurial Skills-II	2
	Unit 5: Green Skills-II	2
	Total	**10**
PART	**Subject Specific Skills**	
	Unit 1: Revisiting AI Project Cycle & Ethical	7

- B	Frameworks for AI	
	Unit 2: Advanced Concepts of Modeling in AI	11
	Unit 3: Evaluating Models	10
	Unit 4: Statistical Data	-
	Unit 5: Computer Vision	4
	Unit 6: Natural Language Processing	8
	Unit 7: Advance Python	-
	Total	**40**
PART - C	**Practical & Project Work:**	**Marks**
	Practical File with minimum 15 Programs	**15**
	Practical Examination • Unit 4: Statistical Data • Unit 5: Computer Vision • Unit 6: Natural Language Processing • Unit 7: Advance Python	**5** **5** **5**
	Viva Voce	**5**
	Project Work / Field Visit / Student Portfolio (Any one to be done)	**10**
	Viva Voce (related to project work)	**5**
	Total	**50**
	GRAND TOTAL	**100**

Artificial Intelligence
Syllabus Planner (2025-2026)

Detailed curriculum : https://cbseacademic.nic.in/web_material/Curriculum26/sec/417-AI-X.pdf

Units	Sessions	Topics	Month
	1.1 AI Project Cycle	The overview of the six stages of the AI Project Cycle	April

Unit -1- Revisiting AI Project Cycle & Ethical Frameworks for AI1	1.2 Introduction to AI Domains	The three domains of AI and their applications **Activity: Movie Mania**	
	1.3 Ethical Frameworks of AI	• Frameworks • Ethical frameworks • Need of Ethical Frameworks for AI • Factors that influence our decision- making • Types of Ethical Frameworks • Bioethics and its principles • A use case of Bioethics **Activity: My Goodness https://www.my-goodness.net/**	
Unit 2. Advanced concepts of Modeling in AI	2.1 Revisiting AI, ML and DL	• Differentiate between AI, ML and DL • Common terminologies used with data	May
	2.2 Modelling	• Types of AI models –Rule based, Learning based • Categories of Machine learning based models – • Supervised, Unsupervised and Reinforcement learning models • Subcategories of • Supervised Learning Model – Classification, Regression • Subcategories of Unsupervised Learning Model – Clustering, Association Session: Categories of Machine learning based models: Supervised Learning (https://teachablemachine.withgoogle.com/), Unsupervised Learning	

		(https://experiments.withgoogle.com/ai/drummachine/view/), Reinforcement Learning	
	2.3 Neural Networks	• What is neural network? • How does AI make a decision?	
Unit 3: Evaluating Models	3.1 Importance of Model Evaluation	• What is evaluation? • Why do we need a model evaluation?	July
	3.2 Splitting the training set data for Evaluation	• What is Train-test split? • Why do we need to do Train- test split?	
	3.3 What is Accuracy and Error?	• Accuracy • Error	
	3.4 Evaluation metrics for	• What is Classification? • Classification metrics • Confusion matrix • Accuracy from Confusion matrix • Precision from Confusion matrix • Recall from Confusion matrix • F1 Score	

	classification		
	3.5 Ethical concerns around model evaluation	• Bias • Transparency • Accountability	
Unit 4: Statistical Data	4.1 No code AI for Statistical Data	• Meaning of No-Code AI • No-Code and Low-Code. • Some no-code tools	August-September
	4.2 Statistical Data: Use Case Walk through	• Important concepts in Statistics. • Orange data mining • AI project cycle in Orange data mining (Palmer penguins case study)	
Unit 5: Computer Vision	5.1 Introduction to Computer Vision	• CV open-source tool • A Quick overview of computer vision • Computer Vision and Artificial Intelligence • Computer Vision v/s Image Processing	October
	5.2 Applications of CV	• Facial Recognition • Face Filters • Google Search by Image • Computer Vision in retail • Self-Driving cars • Medical Imaging • Google Translate App	

	5.3 Computer Vision Tasks	• Classification • Classification + Localisation • Object Detection • Image Segmentation • Basics of Images and Pixels • Resolution & Pixel Value • Grayscale & RGB Images	
	5.4 No-Code AI tools	• Introduction to Lobe • Teachable Machine • Smart Sorter Activity • Orange Data Mining Tool • Use Case Walkthrough • Steps to project development	
	5.5 Image Features	• Introduction to image features • Examples • Conclusion	
	5.6 Convolution	• Convolution • What is Kernel?	
	5.7 Convolution Neural Network	• Introduction • Convolution Layer • Rectified Linear Unit • Pooling Layer • Fully Connected Layer	
	5.8 Python libraries in Computer Vision	• TensorFlow • Keras • OpenCV • Applications of OpenCV	

UNIT 7: ADVANCE PYTHON (To be assessed through Practicals)	Able to write basic Python programs using fundamental concepts such as variables, data types, operators, and control structures.	Session: Introduction to Python	October
Unit-6 Natural Language Processing	6.1 Introduction to NLP	• Features of natural language • Computer language • Importance of NLP	November
	6.2 Applications of Natural Language Processing	• Voice Assistants • Auto Generated captions • Language translation • Sentiment analysis • Text classification • Keyword extraction	
	6.3 Stages of Natural Language Processing (NLP)	• Lexical Analysis • Syntactic Analysis • Semantic Analysis • Discourse Integration • Pragmatic Analysis	
	6.4 Chatbots	Differences between a Script bot and a Smart bot	
	6.5 Text	• Text Normalisation • Bag of words • TFIDF	

	Processing	• Applications of TFIDF	
	6.6 Natural Language Processing: Use Case Walkthrough	• Examples of code and no-code tools • Applications of Sentiment Analysis • Sentiment Analysis using the Orange Data Mining tool.	
UNIT 7: ADVANCE PYTHON (To be assessed through Practicals)	Able to use Python built-in functions and libraries.	• Session: Python Basics	November

HINDUSTANI MUSIC - VOCAL
Subject Code - 034
Class X (2025-26)

Assessment Design

S.No	Component	Marks
A	Theory	30
B	Practical	50
C	Internal Assessment	20

Curriculum & Examination Structure

(A) Theory **Max. Marks 30**
Time: 02 hours

1. Questions to be set with internal choice covering the entire syllabus.

S.No.	Units	Marks
	Unit 1 (April)	06
1.1	Define the following :Aalap, Taan, Meend, Kan	
1.2	Define the following: Dhrupad, Dhamar, Tarana,	
	Unit 2 (May)	06
2.1	Basic knowledge of the structure and Tuning of Tanpura.	
	Unit 3 (July & August)	06
3.1	Detailed study of the following Ragas:Bhupali, Khamaj, Brindavani Sarang	
3.2	Description and Tala notation of the following: Talas with Thah, Dugun, Tigun and Chaugun Tilwada, Chautala, Rupak.	
	Unit 4 (September)	06
4.1	Ability to write notation of compositions in prescribed ragas.	
4.2	To identify Ragas from phrases and elaborate them in Swaras.	
	Unit 5 (October)	06
5.1	Brief life sketch and contribution to music of Tansen. Sadarang and Faiyaz Khan to music	

5.2	Contribution of Omkar Nath Thakur	

(B) Practical **Max. Marks 50**

(i)Topics

April To November

1.	One Vilambit Khayal with simple elaborations in any one of the prescribed Ragas. • Bhupali • Khamaj • Brindavani Sarang
2.	Aaroha, Avaroha, Pakad and Drut Khayal with simple elaborations and few Tanas in each of the prescribed Ragas :
3.	Devotional Song
4.	Ability to recognize the prescribed Ragas from the phrases of Swaras rendered by the examiner.
5.	Recitation of the Thekas of the following Talas with dugun, keeping Tala with hand- beats: • Tilwada • Chautala • Rupak

(ii) Distribution of Marks Time: 20-25 Minutes for each candidate

1. External Examiners are requested to ask questions directly related to the syllabus.
2. Marks should be awarded in accordance with the marking scheme.

S.No.	April To November	Marks
	Value Points	
1.	One Vilambit Khayal with simple elaborations in any one of the prescribed Raga: • Bhupali • Khamaj • Brindavani Sarang	12
2.	Aroha, Avroha, Pakad and Drut Khayal with simple elaborations and few Tanas in each prescribed Raga.	24
3.	Devotional Song	04
4.	Identification of prescribed Ragas from the phrases of Swaras rendered by the examiner.	04

5.	Recitation of Thekas of the following prescribed Talas with dugun: • Tilwada • Chautala • Rupak	06

* External Examiners will refer to the distribution of marks while examining the candidate for practical examination.

(C) Internal Assessment: Max. Marks 20

1. Project–File (April to August) (05 Marks)

- Writing in notation the musical compositions of all Ragas prescribed in the syllabus.
- Identifying the Tala of musical compositions.
- Drawing and labelling the various parts of any percussion instrument.
- Description and writing the notation of all prescribed Talas with Layakaris (Thah, Dugun, Tigun, Chaugun).
- Identifying and interviewing any neighborhood artists.

2. Project Work (April to August)
(05 Marks)

Suggestive Topics *

Interrelationship of the following:

- Music and Religion
- Music and Cinema
- Music and Electronic Media
- Devotional aspects in Music
- Inter-relationship of Arts (Music - Dance or Theatre or Visual Arts)

*Students may choose any one of the above topics or any other topic for project in consultation with the teacher.

3. Periodic practical Test, restricted to three in an Academic year. (10 Marks) Average of best two tests to be taken for final marks submission. Each test will examine a candidate for one Raga from the syllabus, one Devotional Song and two Talas.