

# HP Board Class 10 Syllabus

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Note:- The Syllabus of Subjects mention at S. No 17 - 27 & 28 is provided by the SPD (RMSA) & NSE (National Stock Exchange)

## SCHEME OF EXAMINATIONS

**THE FOLLOWING IS THE SCHEME OF EXAMINATION FOR MATRICULATION  
EXAMINATION:-**

| Sr. No. | Subject   | Comp/Ele/Voc    | Prt/non prt | THEORY MARKS | PRACTICAL MARKS | INA |
|---------|---|-----------------|-------------|--------------|-----------------|-----|
| 1.      | English   | Compulsory      | NP          | 85           | -               | 15  |
| 2.      | Mathematics   | Compulsory      | NP          | 85           | -               | 15  |
| 3.      | Hindi   | Compulsory      | NP          | 85           | -               | 15  |
| 4       | Social Science                                      | Compulsory      | NP          | 85           | -               | 15  |
| 5.      | Science & Technology                                | Compulsory      | Prt         | 60           | 25              | 15  |
| 6.      | Urdu  | Elective        | NP          | 85           | -               | 15  |
| 7.      | Art (a)   | Elective        | Prt         | 50           | 35              | 15  |
| 8.      | Sanskrit  | Elective        | NP          | 85           | -               | 15  |
| 9.      | Agriculture   | Vocational NSQF | P           | 35           | 50              | 15  |
| 10.     | Economics   | Elective        | NP          | 85           | -               | 15  |
| 11.     | Home Science  | Elective        | P           | 60           | 25              | 15  |
| 12.     | Music Vocal   | Elective        | P           | 25           | 60              | 15  |
| 13.     | Music Intru.  | Elective        | P           | 25           | 60              | 15  |
| 14.     | Tamil   | Elective        | NP          | 85           | -               | 15  |
| 15.     | Telugu  | Elective        | NP          | 85           | -               | 15  |
| 16.     | Panjabi   | Elective        | NP          | 85           | -               | 15  |
| 17.     | Computer Sci.                                       | Elective        | P           | 35           | 50              | 15  |
| 18.     | Commerce  | Elective        |             |              |                 |     |
|         | (i) Elements of Business                            |                 | NP          | 85           | -               | 15  |
|         | (ii) Elements of Book Keeping                       |                 | P           | 85           | -               | 15  |
|         | (iii) Typewriting Hindi & Eng                       |                 | P           | 25           | 60              | 15  |
| 19.     | Automobiles   | Vocational NSQF | P           | 35           | 50              | 15  |
| 20.     | Security  | Vocational NSQF | P           | 35           | 50              | 15  |
| 21.     | Retail  | Vocational NSQF | P           | 35           | 50              | 15  |
| 22.     | ITES  | Vocational NSQF | P           | 35           | 50              | 15  |
| 23.     | Health Care   | Vocational NSQF | P           | 35           | 50              | 15  |
| 24.     | Tourism   | Vocational NSQF | P           | 35           | 50              | 15  |
| 25.     | Telecom   | Vocational NSQF | P           | 35           | 50              | 15  |
| 26.     | physical Education                                  | Vocational NSQF | P           | 35           | 50              | 15  |
| 27.     | BFSI (Banking, Finance Service & Insurance wef 2018 | Vocational NSQF | P           | 35           | 50              | 15  |
| 28.     | Media & Entertainment 2018                          | Vocational NSQF | P           | 35           | 50              | 15  |
| 29.     | Financial Literacy                                  | Elective        | NP          | 85           | -               | 15  |

## Matriculation Scheme of Studies

The following are the subjects of studies for Class X. A candidate is required to study 7 subjects.

### Group I

#### **Compulsory Subjects:**

1. Hindi
2. English
3. Mathematics
4. Science and technology
5. Social Science

### Group II

#### **Elective Subjects**

**Any two subjects out of Groups II (A) and II (B) but not more than one subject from each Group.**

#### **Group II (A)**

1. Urdu
2. Tamil
3. Telugu
4. Sanskrit
5. Panjabi

#### **Group II (B)**

6. Art
7. Music
8. Home Science
9. Economics
10. Commerce
11. Introductory Information Technology (Computer Science I.T)
12. Automobiles
13. Security
14. Retail
15. Information Technology Enabled Services
16. Healthcare
17. Financial Literacy
18. Agriculture
19. Tourism
20. Telecom
21. Phy. Education
22. BFSI (Banking, Finance Service & Insurance)
23. Media & Entertainment

**NOTE:** The Subjects mentioned at serial number 12 to 23 of Group II (B) have been incorporated under the NVEQF. The Candidates opting for one of these subjects are advised to do so keeping in view their future requirements under the NVEQF scheme. The candidates who fail to qualify in the subject opted from Sr. No. 12 to 23 above group II(B) in 10<sup>th</sup> Standard shall not be allowed to opt the same subject for Level III in 11<sup>th</sup> Class.

**NB:** Examination for NVEQF subjects will be held for levels defined in NVEQF scheme and candidates after prescribed testing will be issued a separate certificate indicating the level of skill acquired.

## 01. ENGLISH LANGUAGE AND LITERATURE

### Background

Traditionally, language-learning materials beyond the initial stages have been sourced from literature: Prose, fiction and poetry. While there is a trend for inclusion of a wider range of contemporary and authentic texts, accessible and culturally appropriate pieces of literature should play a pivotal role at the secondary stage of education. The English class should not be seen as a place merely to read poems and stories in, but an area of activities to develop the learner's imagination as a major aim of language study, and to equip the learner with communicative skills to perform various language functions through speech and writing.

### Objectives

The general objectives at this stage are:

- To build greater confidence and proficiency in oral and written communication
- To develop the ability and knowledge required in order to engage in independent reflection and inquiry
- To use appropriate English to communicate in various social setting.
- Equip learners with essential language skills to question and to articulate their point of view.
- To build competence in the different registers of English.
- To develop sensitivity to, and appreciation of other varieties of English, Indian English, and the culture they reflect.
- To enable the learner to access knowledge and information through reference skills (consulting a dictionary/thesaurus, library, internet etc.)
- To develop curiosity and creativity through extensive reading
- To facilitate self-learning to enable them to become independent learners
- To review, organize and edit their own work and work done by the peers
- At the end of this stage learners will be able to do the following:
  - Give brief oral description of events/incidents of topical interest
- Retell the contents of authentic audio texts (weather reports, public announcements, simple advertisements, short interviews, etc.)
- Participate in conversations, discussion, etc. on topics of mutual interest in non-classroom situations
- Narrate the story depicted pictorially or in any other non-verbal mode.
- Respond in writing to business letters, official communications.
- Read and identify the main points/significant details of texts like scripts of audio-video interviews, discussions, debates etc.

- Write without prior preparation on a given topic and be able to defend or explain the position taken view expressed.
- Write an assessment of different points of view expressed in a discussion/debate.
- Read poems effectively (With proper rhythm and information)
- To transcode information from a graph/chart to a description/report

### **Language Items**

In addition to consolidating the grammatical items practiced earlier, the courses at secondary level will seek to reinforce the following explicitly:

- Sequence of tenses.
- Reported speech in extended texts
- Modal auxiliaries (those not covered at upper primary)
- Non-finites (infinitives, gerunds, participles)
- Conditional clauses
- Complex and compound sentences
- Phrasal verbs and prepositional phrases
- Cohesive devices.
- Punctuation (semicolon, colon, dash, hyphen, parenthesis or use of brackets and exclamation mark)

### **Methods and Techniques**

The methodology will be based on a multi-skill, activity based, learner centered approach. Care would be taken to fulfill the functional (communicative), literary (aesthetic) and cultural (sociological) needs of the learner. In this situation the teacher is the facilitator of learning, she/he presents language items, contrives situations which motivates the child to use English for the purposes of communication and expression. Aural-oral teaching and testing is an integral feature of the teaching-learning process. The electronic and print media could be used extensively. The evaluation procedure should be continuous and comprehensive. A few suggested activities are:

- Role playing
- Simulating real-to-life situations
- Dramatizing and miming.
- Problem solving and decision making.
- Interpreting information given in tabular form and schedule.
- Using newspaper clippings
- Borrowing situations from the world around the learners, from books and from other disciplines

- Using language games, riddles, puzzles and jokes.
- Interpreting pictures/sketches/cartoons.
- Debating and discussing.
- Narrating and discussing stories, anecdotes, etc.
- Reciting poems
- Working in pairs and groups.
- Using media inputs-computer, television, video cassettes, tapes, software packages.

|   |                 |                   |
|---|-----------------|-------------------|
| <b>One Paper</b>  | <b>3 Hours</b>  | <b>Marks : 85</b> |
| <b>Section-A : Reading</b>  | <b>17 Marks</b> |                   |
| <b>1 &amp; 2</b> Two questions of unseen passages with a variety of questions including vocabulary. Only prose passages will be used. One will be factual and the other will be literary. |                 |                   |
| Passage 1. Four or Five Comprehension questions.  |                 | <b>(7 Marks)</b>  |
| Passage 2. Five comprehension questions and four Multiple choice questions (MCQ)  |                 | <b>(10 Marks)</b> |
| <b>Section-B : Writing</b>  | <b>20 Marks</b> |                   |
| <b>3.</b> Letter writing-one letter based on provided verbal stimulus and context.  |                 |                   |
| <b>Types of letter:</b>   |                 |                   |
| <b>Informal:</b> Personal such as to family and friends   |                 | <b>(7 Marks)</b>  |
| <b>Formal:</b> Letter of complaint, enquiry, request, application.  |                 |                   |
| <b>4.</b> Writing a paragraph on a given outline/topic.   |                 | <b>(9 Marks)</b>  |
| <b>5.</b> A short writing task based on a verbal visual stimulus (Diagram, picture, graph, map, chart, table, flowchart etc.)   |                 | <b>(4 Marks)</b>  |
| <b>Section-C: Grammar</b>   | <b>15 Marks</b> |                   |

### Question No. 6-10

A variety of short questions involving the use of particular structures within a context. Text type include cloze, gap-filling, sentence Completion, sentence- reordering, dialogue Completion and sentence-transformation Combining sentences.

The grammar syllabus will include the following areas

1. Connectors
2. Tense
3. Prepositions
4. Reported speech
5. Models
6. Voice
7. Non-Finites
8. Transformation of sentences.

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**Section-D Text Books****33 Marks**

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**Q. 11** One extract from different prose lessons from First Flight (Reader)(Approximately 100 words)

This extract will be literary or discursive in nature. The extract will have five Question used for testing local and global comprehension beside a question on interpretation and vocabulary.

**( 5 Marks)**

**Q. 12** One extract from a poem from First Flight (Reader) followed by two or three questions to test the local and global comprehension of the text.

**( 3 Marks)**

**Q.13** One out of two questions extrapolative in nature based on any one of the prose lessons from First Flight (Reader) to be answered in about 80 to 100 words.

**( 5 Marks)**

**Q.14** Two out of three short answer type questions in interpretation of them and ideas contained in the poems from First Flight(Reader) to be answered is 30-40 words each.

**(4 Marks)**

**Q.15** One out of two questions from First Flight (Reader) to interpret, evaluates and analyze character, plot or situation occurring in the text.

**( 8 Marks)**

**Q.16** One out of two questions from supplementary reader to interpret, evaluate and analyze character, plot or situation occurring in the text.

**( 4 Marks)**

**Q.17** One out of two questions from Supplementary Reader to interpret plot or situation from the text.

**( 4 Marks)**

**PRESCRIBED BOOKS**

- |                            |  |
|----------------------------|--|
| 1. First Flight            | Published by H.P Board of School Education |
| 2. Footprints without Feet | Published by H.P Board of School Education |

### **3.MATHEMATICS**

The Syllabus in the subject of Mathematics has undergone changes from time to time in accordance with growth of the subject and emerging needs of the society. The present revised syllabus has been designed in accordance with National Curriculum Framework 2005 and as per guidelines given in Focus Group on Teaching of Mathematics which is to meet the emerging needs of all categories of students for motivating the teacher to relate the topics from real life problems and other subject areas, greater emphasis has been laid on applications of various concepts.

The curriculum at Secondary stage primarily aims at enhancing the capacity of students to employ Mathematics in solving day-to-day life problems and studying the subject as a separate discipline. It is expected that students should acquire the ability to solve problems using algebraic methods and apply the knowledge of simple trigonometry to solve problems of heights and distances. Carrying out experiments with numbers and forms of geometry, framing hypothesis and verifying these with further observations form inherent part of Mathematics learning at this stage. The proposed curriculum includes the study of Arithmetical concepts, number system, algebra, geometry, trigonometry, mensurations, statistics, graphs and coordinate geometry etc.

The teaching of Mathematics should be imparted through activities which may involve the use of concrete materials, models, patterns, charts, pictures posters games, puzzles and experiments.

#### **OBJECTIVES**

The board's objectives of teaching of Mathematics at secondary stage are to help the learners to :

1. Consolidate the Mathematical Knowledge and Skills acquired at the upper primary stage.
2. Acquire knowledge and understanding, particularly by way of motivation and visualization, of basic concepts, terms, principles and symbols and underlying processes and skills.
3. Develop mastery of basic algebraic skills;
4. Develop drawing skills;
5. Feel the flow of reasons while proving a result or solving a problem.
6. Apply the Knowledge and skills acquired to solve problems and wherever possible, by more than one method
7. To develop positive ability to think analyze and articulate logically.
8. To develop awareness of the need for national integration, protection of the environment, observance of small family norms. Removal of social barriers, elimination of gender biases.
9. To develop necessary skills to work with modern technological devices fields for its beautiful structures and patterns etc.
10. To develop interest in Mathematics as a problem-solving tool in various fields for its beautiful structures and patterns, etc.
11. To develop reverence and respect towards great Mathematicians for their contributions to the field of Mathematics.
12. To develop interest in the subject by participating in related competitions
13. To acquaint students with different aspects of mathematics used in daily life.
14. To develop an interest in students to study mathematics as discipline

| UNIT         |                            | Marks     |
|--------------|----------------------------|-----------|
| I.           | Number Systems             | 05        |
| II.          | Algebra                    | 21        |
| III.         | Trigonometry               | 14        |
| IV.          | Coordinate Geometry        | 07        |
| V.           | Geometry                   | 16        |
| VI.          | Mensuration                | 12        |
| VII.         | Statistics And Probability | 10        |
| <b>TOTAL</b> |                            | <b>85</b> |

**UNIT I : NUMBER SYSTEMS****1. REAL NUMBERS****( 5 Marks)**

Euclid's division lemma, Fundamental Theorem of Arithmetic-statements after reviewing work done earlier and after illustrating and motivating through examples, Proofs of results-irrationality of  $\sqrt{2}$ ,  $\sqrt{3}$ ,  $\sqrt{5}$ , decimal expansions of rational numbers in terms of terminating non-terminating recurring decimals.

**UNIT II : ALGEBRA****1. Polynomials****( 5 Marks)**

Zeros of a polynomial, Relationship between zeros and coefficients of a polynomial with particular reference to quadratic polynomials. Statement and simple problems on division algorithm for polynomials with real coefficients.

**2. Pair of Linear Equations in Two Variables.****( 4 Marks)**

Pair of linear equations in two variables. Geometric representation of different possibilities of solutions inconsistency.

Algebraic conditions for number of solutions. Solution of pair of linear equations in two variables algebraically by substitution, by elimination and by cross multiplication. Simple situational problems must be included. Simple problems on equations reducible to linear equations may be included.

**3. Quadratic Equations****( 7 Marks)**

Standard form of a quadratic equation  $ax^2+bx+c = 0$ , ( $a \neq 0$ ). Solution of the quadratic equations (only real roots) by factorization and by completing the square, i.e. by using quadratic formula. Relationship between discriminant and nature of roots.

Problems related to day to day activities to be incorporated.

#### 4. Arithmetic Progression

(5 Marks)

Motivation for studying AP. Derivation of standard results of finding the  $n^{\text{th}}$  term and sum of first  $n$  terms

### UNIT III : TRIGONOMETRY :

#### 1. Trigonometric Ratios

(9 Marks)

Trigonometric ratios of an acute angle of a right-angled triangle. Proof of their existence (well defined); motivate the ratios, whichever are defined at  $0^\circ$  &  $90^\circ$ . Values (with proofs) of the trigonometric ratios of  $30^\circ$ ,  $45^\circ$ , &  $60^\circ$ . Relationships between the ratios.

#### 2. Trigonometric Identities

Proof and applications of the identity  $\sin^2 A + \cos^2 A = 1$ . Only simple identities to be given. Trigonometric ratios of complementary angles.

#### 3. Heights and Distances

(5 Marks)

Simple and believable problems on heights and distances. Problems should not involve more than two right triangles. Angles of elevation/ depression should be only  $30^\circ$ ,  $45^\circ$ ,  $60^\circ$ .

### UNIT IV : COORDINATE GEOMETRY

#### 1. Lines (In two-dimensions)

(7 Marks)

Review the concepts of coordinate geometry done earlier including graphs of linear equations. Awareness of geometrical representation of quadratic polynomials. Distance between two points and section formula (internal). Area of a triangle.

### UNIT V : GEOMETRY

#### 1. TRIANGLES

(9 Marks)

#### Definitions, examples, counter examples of similar triangles.

1. (Prove) If a line is drawn parallel to one side of a triangle to intersect the other two sides in distinct points, the other two sides are divided in the same ratio.
2. (Motivate) If a line divides two sides of a triangle in the same ratio, the line is parallel to the third side.
3. (Motivate) If in two triangles, the corresponding angles are equal, their corresponding sides are proportional and the triangles are similar.
4. (Motivate) If the corresponding sides of two triangles are proportional, their corresponding angles are equal and the two triangles are similar.

5. (Motivate) If one angle of a triangle is equal to one angle of another triangle and the sides including these angles are proportional, the two triangles are similar.
6. (Prove) The ratio of the areas of two similar triangles is equal to the ratio of the squares on their corresponding sides.
7. (Motivate) If a perpendicular is drawn from the vertex of the right angle of a right triangle to the hypotenuse, the triangles on each side of the perpendicular are similar to the whole triangle and to each other.
8. (Prove) In a right triangle, the square of the hypotenuse is equal to the sum of the squares of the other two sides.
9. (Prove) In a triangle, if the square on one side is equal to sum of the squares on the other two sides, the angles opposite to the first side is a right triangle.

## 2. CIRCLES

**( 4 Marks)**

Tangents to a circle motivated by chords, drawn from points coming closer and closer and closer to the point.

1. (Prove) The tangent at any point of a circle is perpendicular to the radius through the point of contact.
2. (Prove) The lengths of tangents drawn from an external point to circle are equal.

## 3. CONSTRUCTIONS

**( 3 Marks)**

1. Division of line segment in a given ratio (internally)
2. Tangent to circle from a point outside it.
3. Construction of a triangle similar to a given triangle.

## UNIT VI MENSURATION

### 1. AREAS OF PLANE FIGURES

**( 6 Marks)**

The area of circle; area of sectors and segments of a circle. Problems bases on areas and perimeter/ circumference of the above said plane figures. (In calculating area of segment of a circle, problems should be restricted to central angle of  $60^\circ$ ,  $90^\circ$ , &  $120^\circ$  only. Plane figures involving triangles, simple quadrilaterals and circle should be taken).

### 2. SURFACE AREAS AND VOLUMES

**( 6 Marks)**

- I. Problems on finding surface areas and volumes of combinations of any two of the following cubes, cuboids, spheres, hemispheres and right circular cylinders/cones. Frustum of a cone.
- II. Problems involving concerting one type of metallic solid into another and other mixed problems. (Problems with combination of not more than two different solids be taken)

## UNIT VII : STATISTICS AND PROBABILITY

### 1. Statistics

(5 Marks)

Mean, median and mode of grouped data (bimodal situation to be avoided). Cumulative frequency graph.

### 2. PROBABILITY

(5 Marks)

Classical definition of probability. Connection with probability as given in class IX. Simple problems on single events, not using set notation.

#### Prescribed Book :

1. Ganit Published by H.P. Board of School Education.



## 04.SCIENCE AND TECHNOLOGY

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 esthetic sensibility.

Upper primary stage demands that number of opportunities should be provided to the students to engage them with the processes of science like observing, recording observation, drawing, tabulation, plotting graphs etc., where as the secondary stage also expects abstraction and quantitative reasoning to occupy a more central place in the teaching and learning of science. Thus, the idea of atoms and molecules being the building blocks of matter makes its appearance, as does Newton's law of Gravitation.

The present syllabus has been designed around seven broad themes via, Food, Materials, the World of the Living, How things Work, Moving Things, People and Ideas, Natural Phenomenon and Natural Resources. Special care has been taken to avoid temptation of adding too many concepts than can be comfortably learnt in the given time frame. No attempt has been made to be comprehensive.

At this stage, while science is still a common subject, the disciplines of Physics, Chemistry and Biology begin to emerge. The students should be exposed to experiences based on hands on activities as well as modes of reasoning that are typical of the subject.

### Distribution of Marks

| <u>Unit</u>                                     |   | <u>Marks</u> |
|---|---|--------------|
| 1) Chemical substances<br>(Nature and Behavior) | - | 18           |
| 2) The World of the Living                      | - | 18           |
| 3) How Things Work                              | - | 16           |
| 4) Natural Resources                            | - | 08           |
| <b>Total</b>                                    | - | <b>60</b>    |

### Theory

**Theme –**

**Materials**

**Unit 1-**

Chemistry Substances Nature and Behavior

**18 Marks**

| <b>Question</b>                | <b>Marks</b>    |
|--------------------------------|-----------------|
| 1 Question (Long Answer)       | 5 marks         |
| 3 Question (Very Short Answer) | 6 marks         |
| 4 Question (Objective)         | 4 marks         |
| 1 Question (Short Answer)      | 3 marks         |
| <b>9 QUESTIONS</b>             | <b>18 MARKS</b> |

**Chapter-1** Chemical Reaction and Equations

1. Chemical Equations
2. Types of Chemical Reactions
  - a) Combination Reaction
  - b) Decomposition Reaction



- Chapter-6** Life Processes
1. Basic concept of nutrition, respiration, transport and excretion in plants and animals.
- Chapter-7** Control and Co-ordination
1. Nervous System, Reflex Action and Human Brain and Animal Hormones.
  2. Coordination in Plants: Tropic Movements and plant Hormones.
- Chapter-8** How to Organisms Reproduce
1. Importance of Variation
  2. Modes of Reproduction : Asexual and Sexual (Both in Plants and Animals)
  3. Reproduction in Human Beings:  
Male and Female Reproductive systems
  4. Reproduction Health: Need and methods of family planning, safe sex vs HIV/AIDS.
- Chapter-9** Heredity and Evolution
1. Heredity
  2. Sex Determination
  3. Evolution and Classification
  4. Tracing Evolution Relationships
  5. Fossils.
- Chapter-15** Our Environment
1. Bio-degradable and Non-Biodegradable substances.
  2. Eco-system and its components.
  3. Food chain and Food Web.
  4. Environmental problems and their solutions: Ozone layer and Management of Garbage.

**Theme-** **How things work**

**Unite3-** Effect of Current

**16 Marks**

| Question                       | Marks           |
|--------------------------------|-----------------|
| 4 Question (Objective)         | 4 mark          |
| 2 Question (Very Short Answer) | 4 marks         |
| 1 Question (Long Answer)       | 5 marks         |
| 1 Questions (Short Answer)     | 3 marks         |
| <b>8 QUESTION</b>              | <b>16 MARKS</b> |

- Chapter-12** Electricity
1. Electric Current and circuit
  2. Electric potential and potential difference
  3. Ohm's Law
  4. Series and Parallel combination of resistors.

5. Heating Effect of Electric Current
6. Electric Power
7. Inter relation between P,V,I and R.

**Chapter-13** Magnetic Effects of Electric Current

1. Magnetic field and field lines
2. Magnetic field due to a current
  - a) Straight conductor
  - b) Circular loop
  - c) Solenoid
3. Fleming's Right Hand Thumb Rule
4. Left Hand Rule
5. Electric Motor, Electromagnetic Induction
6. Electric Generator and Domestic Electric Circuit

**Theme-**

**Natural Phenomena**

**Convergence and Divergence of light**

**Chapter-10**

Light- Reflection and refraction

1. Reflection of light
2. Spherical Mirrors: Concave and convex
3. Image Formation with Ray diagrams.
4. Mirror Formula and Magnification
5. Refraction of light through Glass Slab and lenses (convex and concave) and Image formation by lenses.
6. Lens formula and Magnification
7. Uses of Mirrors and Lenses
8. Power of Lens.

**Chapter-11**

The Human Eye and the Colorful World.

1. The Human Eye.
2. Power of Accommodation
3. Defects of Vision and Their correction
4. Refraction of Light Through Prism
5. Dispersion of light and scattering of light
6. Atmospheric Refraction
  - a) Twinkling of Stars
  - b) Tyndall Effect

**Theme-  
Unit4-**

**Natural Resources**

Conservation of Natural Resources

**08 Marks**

| Question                       | Marks           |
|--------------------------------|-----------------|
| 3 Question (Objective)         | 3 mark          |
| 1 Question ( Short Answer)     | 3 marks         |
| 1 Question (Very Short Answer) | 2 marks         |
| <b>5 QUESTION</b>              | <b>08 MARKS</b> |

**Chapter-14**

Sources of Energy

1. Different forms of Energy.

## Chapter-16

2. Leading to different Sources of Human use:  
Fossil fuels, solar energy, biogas, wind water and tidal energy.
3. Renewable and Non-renewable sources.  
Management of Natural Resources.
  1. Conservation and Judicious use of natural resources.
  2. Forests and Wild life
  3. Stake holders and sustainable management
  4. Dams and Water Harvesting
  5. Coal and Petroleum.

### PRACTICAL

#### LIST OF EXPERIMENTS

1. To Find 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 Sodium Bicarbonate Solution.
2. To study the properties of acids and bases HCl and NaOH by their reaction with
  - i. Litmus solution (Blue/Red)
  - ii. Zinc metal
  - iii. Solid Sodium Carbonate
3. To Determine the focal length of
  - i. Concave mirror
  - ii. Convex lensBy obtaining the image of a distant object
4. To trace 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.
5. To study the dependence of current (I) on the potential difference (V) across a resistor and determine its resistance. Also plot a graph between V and I.
6. To determine the equivalent resistance of two resistors when connected in series.
7. To determine the equivalent resistance of two resistors when connected in parallel.
8. To prepare a temporary mount of a leaf peel to show stomata.
9. To show experimentally that carbon dioxide is given out during respiration.
10. To study (a) binary fission in Amoeba and (b) budding in yeast with the help of prepared slides.
11. To determine the percentage of water absorbed by raisins.
12. To prepare SO<sub>2</sub> gas, observe its following properties and draw inferences in respect of
  - i. Odour
  - ii. Solubility in water
  - iii. Effect on litmus paper
  - iv. Action on acidified potassium dichromate solution.
13. a) To observe the action of Zn, Fe, Cu and Al metals on the following salt solutions.
  - i. ZnSO<sub>4</sub>(aq.)
  - ii. FeSO<sub>4</sub>(aq.)
  - iii. Cu SO<sub>4</sub>(aq.)
  - iv. Al<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub> (aq.)

b) Arrange Zn, Fe, Cu and Al metals in the decreasing order of reactivity based on the above result.

15. To study the following properties of acetic acid (ethanoic acid).
- i. Odour
  - ii. Solubility in water
  - iii. Effect on litmus paper
  - iv. Action on acidified potassium dichromate solution.

**Scheme of Examination:**

External Examination (to be conducted by the Board)

**(25 Marks)**

**Prescribed Books :**

1. **Vigyan** Published by H.P. Board of School Education.
2. **Science** Published by H.P. Board of School Education.



## 05.Social Science

### **RATIONALE**

Social Sciences is a compulsory subject up to secondary stage of school education. It is an integral component of general education because it helps the learners in understanding the environment in its totality and developing a broader perspective and an empirical reasonable and humane outlook. This is of crucial importance because it helps them grow into well-informed and responsible citizens with necessary attributes and skills for being able to participate and contribute effectively in the process of development and nation-building.

The social sciences curriculum draws its content mainly from geography, history, civics and economics. Some elements of sociology and commerce are also included. Together they provide a comprehensive view of society-over space and time, and in relation to each other. Each subject's distinct methods of enquiry help the learners study society from different angles and from a holistic view.

### **OBJECTIVES**

The main objectives of this syllabus are:

- To develop an understanding of the processes of change and development-both in terms of time and space, through which human societies have evolved.
- To make learners realize that the process of change is continuous and any event or phenomenon or issue cannot be viewed in isolation but in a wider context of time and space.
- To develop an understanding of contemporary India with its historical perspective of the basic framework of the goals and policies of national development in independent India, and of the process of change with appropriate connections to world development.
- To deepen knowledge about and understanding of India's freedom struggle and of the values and ideals that it represented and to develop an appreciation of the contributions made by people of all sections and regions of the country.
- To help learners understand and cherish the values enshrined in the Indian Constitution and to prepare them for their roles and responsibilities and effective citizens of democratic society.
- To deepen the knowledge and understanding of India's environment in its totality, their interactive processes and effects on the future quality of people's lives.
- To facilitate the learners to understand and appreciate the diversity in the land and people of the country with its underlying unity.
- To develop an appreciation of the richness and variety of India's heritage both natural and cultural and the need for its preservation.

- To promote and understanding of the issues and challenges of contemporary India-environment, economic and social, as part of the development process.
- To help pupils acquire knowledge, skills and understanding to face the challenges of contemporary society as individuals and groups and learn the art of living a confident and stress-free life as well as participating effectively in the community.
- To develop scientific temper by promoting the spirit of enquiry and following a rational and objective approach in analyzing an evaluating data and information as well as views and interpretations.
- To develop academic and social skills such as critical thinking, communication effectively both in visual and verbal forms-cooperating with others, taking initiatives and providing leadership in solving others problems.
- To develop qualities clustered around the personal, social, moral national and spiritual values that make a person humane and socially effective

**3hours****One paper****Marks:85**

|        |                                       | Marks        |
|--------|---------------------------------------|--------------|
| Unit-1 | India and the contemporary World-II   | 21+3(Map)=24 |
| Unit-2 | India-Resources and their Development | 19+3(Map)=22 |
| Unit-3 | Democratic Politics II                | 14           |
| Unit-4 | Understanding Economics-II            | 15           |
| Unit-5 | Disaster Management                   | 10           |

### **India & the Contemporary world-II**

#### **Section-I** Events and Process

##### **1)) The Rise of Nationalism in Europe**

1. The French Revolution & the idea of the Nation.
2. The making of Nationalism in Europe.
3. The Age of Revaluations: 1830-1848.
4. The making of Germany and Italy.
5. Visualizing the Nation.
6. Nationalism and Imperialism.

## **2)) The Nationalist Movement in Indo-China**

1. Emerging from the shadow of China.
2. The Dilemma of colonial Education.
3. Hygiene, Disease and Everyday Resistance.
4. Religion and Anti-colonialism.
5. The vision of Modernization.
6. The communist Movement and Vietnamese Nationalism.
7. The Nation and its Heroes.
8. The End of the War.

## **3)) Nationalism in India**

1. The first world war, Khilafat & Non-Cooperation.
2. Differing strands within the Movement.
3. Towards civil Disobedience.
4. The sense of collective Belonging.

### **Section-II**      Livelihoods, Economics and Societies

## **4)) The Making of a Global world**

1. The Pre-Modern World
2. The Nineteenth Century(1815-1914)
3. The Inter war Economy
4. Rebuilding a world Economy : The Post-war Era

## **5)) The Age of Industrialization**

1. Before the Industrial Revolution.
2. Hand labour and steam power.
3. Industrialization in the colonies.
4. Factories come up.
5. The Peculiarities of Industrial Growth.
6. Market for Goods.

## **6)) Work, Life and Leisure-Cities in the Contemporary World**

1. Characteristics of the city.
2. Social change in the city.
3. Politics in the city.
4. The city in colonial India.
5. Cities and the challenges of the Environment.

**Section-III**    Everyday life, Culture and Politics

**7)) Print culture and the Modern World**

1. The First Printed books.
2. Print comes to Europe.
3. The Print Revolution and its Impact.
4. The Reading Mania.
5. The Nineteenth Century.
6. India and the World of Print.
7. Religious Reforms and Public Debates.
8. New forms of Publication.
9. Print and Censorship.

**8)) Novels, Society and History**

1. The Rise of the Novel.
2. The Novel comes to India.
3. Novel in the colonial world.
4. Women and the Novel.
5. The Nation and its History.

**Democratic Politics-II**

**Chapter No.01        Power Sharing:-**

1. Belgium and Srilanka.
2. Majoritarianism in Srilanka.
3. Accommodation in Belgium.
4. Forms of Power Sharing.

**Chapter No.02        Federalism:-**

1. Meaning of Federalism.
2. What makes India Federal Country?
3. How is federalism practiced?
4. Decentralization in India.

**Unit 02**

**Chapter No.03        Democracy and Diversity:-**

1. A Story from Mexico Olympics.
2. Differences, Similarities, division.
3. Politics of Social division.

**Chapter No.04**      **Gender, Religion and Caste:-**

1. Gender and Politics.
2. Religion, Communalism and Politics.
3. Caste and Politics.

**Unit 03**

**Chapter No.05**      **Popular Struggles and Movements:-**

1. Popular Struggles in Nepal and Bolivia.
2. Mobilization and organization.
3. Pressure groups and Movements.

**Chapter No.06**      **Political Parties:-**

1. Why do we need Political Parties?
2. How many Parties should we have?
3. A moral force in Politics?
4. Popular Participation in Political Parties.
5. National Political Parties.
6. State Parties.
7. How can Parties be reformed?

**Unit 04**

**Chapter No.07**      **Outcomes of Democracy:-**

1. How do we assess democracy's outcomes
2. Accountable, responsive and legitimate government.
3. Economic growth and development
4. Reduction of inequality and Poverty.
5. Accommodation of Social diversity.
6. Dignity and freedom of the citizens.

**Chapter No.08**      **Challenges to Democracy:-**

1. Thinking about challenges.
2. Different contents different challenges.
3. Different type of challenges.
4. Thinking about political reforms.
5. Redefining democracy.

## Understanding Economic Development

1. Development:- What are Development promises, Income and others goals, National Development, How to compare different countries or states, Income and other criteria, Public facilities Sustainability of Development.
2. Sectors of the Indian Economy:- Sectors of Economic Activities, Comprise of three Sectors, Rising Importance of the tertiary Sector in Production, Where are most of the people employed? How to create more employment? Division of Sectors as organized and unorganized.
3. Money and credit:- Money as a medium of exchange, Modern forms of money, Loan activities of banks, Terms of credit.
4. Globalization And the India Economy:- Meaning of Globalization, Interlinking Production Across countries, Factors that have enabled Globalization, World trade organization, impact of Globalization in India.
5. Consumer Rights:- The consumer in the Market Place

### **Contemporary India II**

1. Resources and Development.
2. Forest and Wildlife Resources:-
  - i. Flora and Fauna in India
  - ii. Conservation of Forest and wildlife in India.
  - iii. Types and distribution of Forest and wildlife Resources.
3. Water Resources
4. Agriculture
5. Mineral and Energy Resources
6. Manufacturing Industries
7. Lifelines of National Economy: - Transport, Communication, International Trade.
8. Map (From Any Chapter) 3 marks

## 7.URDU

**Objectives:-** At present Urdu is widely spoken language of the country with a glorious past. As such it contains highly valued literature on multifarious aspects of country's social and cultural life. During the freedom struggle of the country it was the most inspiring language and its poetry and slogans penetrated deep into the hearts of Indian masses with positive results.

**Specific objectives:-** It is an official language of neighboring state Jammu and Kashmir. It is second language in Uttar Pradesh. It is widely spoken language in many states of the Indian union. Many regional newspapers in some states of India are published in this language. Old generation of H.P. also gets benefit from these Urdu newspapers. This language also happens to be language linguistically interwoven and closely inter related with Hindi our national language hence it is necessary to expose it to new generation.

| One Paper   | 3 Hours | Max. Marks: 85  |
|---|---------|-----------------|
| <b>I. Text Book</b>   |         | <b>37 Marks</b> |
| I. Prose-16 Lessons consisting of:-   |         |                 |
| a) Short stories  |         |                 |
| b) Lessons of General Interest reflecting social, cultural national and moral values.                     |         | 23 Marks        |
| II. Poetry: 10 Poems of Poets for children literature keeping in view the understanding level of children |         | 14 Marks        |
| <b>III. Grammar and Composition:</b>  |         | <b>48 Marks</b> |
| <b>a)</b>   |         |                 |
| (i) Knowledge of Nouns, Pronouns, adjectives and verbs.   |         | 3 Marks         |
| (ii) Singular and Plural Numbers  |         | 3 Marks         |
| (iii) Fill in the Blanks.   |         | 4 Marks         |
| (iv) Use of words and phrases in sentences.   |         | 4 Marks         |
| (v) Use opposite words.   |         | 3 Marks         |
| (vi) Masculine Feminine genders   |         | 3 Marks         |
| <b>b) Composition</b>   |         |                 |
| (i) Essays (very simple topics)   |         | 12 Marks        |
| (ii) Simple letters   |         | 08 Marks        |
| (iii) Simple applications   |         | 08 Marks        |

**Note:- All the questions in grammar should be set on the basis of vocabulary in the Text book.**

## 8.TAMIL

One Paper

3 Hours

85 Marks

### INTRODUCTION:

Tamil classed as one of the Modern Indian language and also one of the earliest languages of India. Tamil belongs to the Dravidian family of languages spoken in the Southern part of India. It has a continuous history of written literature for more than two thousand years. Apart from being the official language of Tamilnadu State, Tamil is one of the national languages in Sri Lanka, Singapore and Malaysia. Tamil people living all over the country have a distinct culture of their own which enriches the tradition and heritage of India. And therefore, it is very necessary that the people of the North Indian States should have an acquaintance with this language. It is with this purpose, on the basis of the three language system (formula) of the Government of India, Tamil is introduced as a subject of study in the schools in the State of Himachal Pradesh.

### SPECIFIC OBJECT OF THIS COURSE

**The main objective of this Course is to develop in the students:**

- (i) An ability to understand Tamil when it is spoken.
- (ii) An ability to read and understand simple Tamil.
- (iii) An ability to write simple Tamil on common topics.
- (iv) An ability to understand and appreciate the way of life and the cultural heritage of the Tamil people.

**Text Book – Tamil – II**

Lesson – 3, 5,7,9,11,17 and 21.

### Course Content

- A. Nouns and Pronouns
- B. Number, Gender and Case-markers.
- C. Antonyms
- D. Verb and Tenses.

**Such as :** Read, Come, Go, Write, Teach, to give, to be.

### Translation

- A. Translation from Tamil to Hindi.
- B. Translation from Hindi to Tamil.

**Note:- Either 10 simple sentences or a passage of about five lines from the Text-Book will be given for translation.**

**Comprehension :**

A passage of about five lines from the prescribe Text-Book Tamil-II will be given out of the lessons mentioned above and the students will be asked to answer the questions and give meanings of four difficult words asked for.

**Text**

The text book will be a collection of small lessons both prose and poetry on various topics in simple style. The students may be asked to fill in the blanks, to write four lines of any poem from the text-book to write in good handwriting the passage given from the text book.

**Essay Writing:**

The students will be asked to write an essay on certain common topics such as My School, My village, Himachal Pradesh, My Best Friend.

**Letters and Application.**

Letter to father for money.

Application to the Headmaster/ Principal for sick leave or leave for an urgent work.

## 9. TELUGU

3 Hours

85 Marks

### 1. Vocabulary :

(A) **Numerals** : 51 to 1000 and upto one crore.

(B) **Pronouns and their Oblique Forms** :

Such as

|       |       |         |
|-------|-------|---------|
| Neenu | naa   | naaku   |
| Miiru | mii   | miiku   |
| Idi   | diini | diiniki |

### 2. Tenses :

(A) **Present Tense : Just as :**

1. Miiru paalu taagutunnadu.
2. Neenu paalu taagutunnanu.

(B) **Past Tense :**

**Example :**

1. Neenu paalu taaganu.
2. Miiru paalu taagaaru.

(C) **Future Tense :**

**Example :**

1. Neenu Paalu taagutaanu.
2. Miiru paalu taagutaaru.

(D) **Use of can and cannot :**

Use of Galunu and leenu.

(E) **Use of should and should not :**

Use of Kaawali and Wodddu.

(F) **Use of Telsu and Teliidu :**

(G) **Conditional Sentences :**

**Example :** Aame Wastee Neenu-Wastaanu.

### 1. Grammer :

1. **Change of Genders :**

Such as Kodduku, Kutturu, Manvadu, Manvarralu etc.

2. **Change the Numbers :**  
Such as Balla, Kurchii, Piillii, Semham etc.
3. **Opposite Words :**  
Just as Manchi, Chinna, I-kkada; Ippudu etc.
4. **Post Position :**  
I Jaggara, Kinda, Lopala, Bayita, Meedu etc.
5. **Use of Ku / ki, Nu / Ni :**

## 2. Text Book :

### 1. Telugu Velugu Part-II :

Lesson No's 1, 2, 3, 4, 5, 7, 8, 9, 12, 13, 15, are to be taught only. The other lessons are deleted. The above book is written by Venpat Raman Rao and published by C.I.I.L. Mysore.

## 3. Composition :

- (A) **Essays :**  
Maa Badi, Maa Uuru, Himachal Pradesh and Maa Sanchitudu etc.
  - (B) **Stories :**  
It will be asked from the Text Book only.
  - (C) **Letters :**
    1. Letters to father for money.
    2. Letter to bookseller for books.
    3. Application for leave.
6. **One passage for comprehension out of the prescribed Text Book.**

## 10. ਪੰਜਾਬੀ

ਸਮਾਂ 3 ਘੰਟੇ

ਕੁੱਲ ਅੰਕ 85

1. ਪਾਠ-ਸਮੱਗਰੀ 42  
ਪੰਜਾਬੀ ਦੇ ਸਰਲ ਇਕਾਂਗਰੀ, ਕਵਿਤਾਵਾਂ, ਕਹਾਣੀਆਂ, ਲੋਕ-ਕਹਾਣੀਆਂ, ਜੀਵਨੀਆਂ, ਸਵੈ-ਜੀਵਨੀਆਂ, ਸਫ਼ਰਨਾਮਿਆਂ ਵਿੱਚੋਂ ਰੋਚਕ ਅੰਸ਼। (ਕੁੱਲ ਰਚਨਾਵਾਂ 20)
  2. ਲੇਖ-ਰਚਨਾ ਅਤੇ ਵਿਆਕਰਨ 43
    - (ੳ) ਦਿੱਤੇ ਸਿੱਟੇ ਤੋਂ ਕਹਾਣੀ ਲਿਖਣਾ (ਲਗ-ਪਗ 250 ਸ਼ਬਦ) 8
    - (ਅ) ਸੰਖੇਪ ਰਚਨਾ (ਪ੍ਰੈਸ਼ੀ) 8
    - (ੲ) ਲੇਖ - ਤਿਉਹਾਰ, ਮੇਲੇ, ਰੁੱਤਾਂ ਮਨੋਰੰਜਨ ਦੇ ਸਾਧਨ, ਸਮਾਜਿਕ, ਸਮੱਸਿਆਵਾਂ, ਵਿਦਿਆਰਥੀ ਜੀਵਨ, ਨਾਲ ਸੰਬੰਧਿਤ ਮਸਲੇ, ਸਫ਼ਰਨਾਮਾ, ਦ੍ਰਿਸ਼ ਵਰਣਨ (ਲਗ-ਪਗ 500 ਸ਼ਬਦ) 12
    - (ਸ) ਅਗੇਤਰ, ਪਿਛੇਤਰ, ਬਹੁਤੇ ਸ਼ਬਦਾਂ ਦੀ ਥਾਂ ਇੱਕ ਸ਼ਬਦ, ਵਿਰੋਧਾਰਥਕ ਸ਼ਬਦ, ਸਮਾਨਾਰਥਕ ਸ਼ਬਦ। 5
    - (ਹ) ਸ਼ਬਦ-ਜੋੜਾ / ਵਾਕਾਂ ਨੂੰ ਸੁਧ ਕਰਕੇ ਲਿਖਣਾ। 5
    - (ਕ) ਲਗਾਂ ਦੀ ਵਰਤੋਂ -
- ਬਿੰਦੀ ਟਿੱਪੀ ਦਾ ਅੰਤਰ,  
ਅੱਧਕ, ਬਿੰਦੀ, ਟਿੱਪੀ ਨੂੰ ਲਾਉਣਾ ਜਾਂ ਨਾ ਲਾਉਣ ਨਾਲ ਅਰਥਾਂ ਵਿੱਚ ਪੈਂਦਾ ਅੰਤਰ।  
ਉਦਾਹਰਣ - ਬਾਗ-ਬਾਂਗ, ਅਜੇ-ਅੱਜੇ, ਧਨ-ਧੰਨ 5  
ਪਾਠ ਪੁਸਤਕ - ਹਿਮਾਚਲ ਪ੍ਰਦੇਸ਼ ਪੰਜਾਬੀ ਪਾਠ-ਪੁਸਤਕ

## 11.Art

### I. INTRODUCTION:

Art education begins with creative aesthetic activities. As the child grows in capacity and understanding, he should be taught in the course of his education to add aesthetic taste and refinement to power and precision. He must be made to appreciate and taught to love the beautiful, lofty, healthy and noble things, whether the nature or in human creation. A methodical and enlightened culture of the senses can, little by little, remove from the child whatever has been vulgar, common place and crude, in him; for one who has developed truly refined taste, because of this very refinement, will feel incapable of acting in a crude, brutal or vulgar manner. This refinement will also give his character nobility and generosity which will spontaneously find expression in his behavior. The teaching of the different arts—dance, music, painting etc. should be based on the same fundamental principle of giving to the student an opportunity for perfecting his own capacities and for helping and encouraging him in the process. Art Education is neglected area in the school curriculum, whatever little art education is imparted, the emphasis is on the learning of skills, and where as the goal of art education should be to develop the aesthetic attitude which permeates all activities and not only the learning of the skills of the Arts. The attitude to the arts in the educational system is full of prejudices the arts are supposed to be intended for the dropouts or the slow learners only. Such attitude needs to be changed. Anything which becomes a vehicle for self-expression and for creativity should be taught to all students rather than to the handful who may be extra-ordinary in either singing or painting.

### II. OBJECTIVES

1. To help the child sharpen his perception and observation of his physical and social environment.
2. To help the child use his own imagination and development of his own concepts and expression through exploration and discoveries of his visual symbols, media and techniques.
3. To develop in the child a sense of organization and design i.e. aesthetic arrangements permeating all life.
4. To help the child achieve all round growth as an individual and as a social being in tune with our culture.
5. To give the child deep and lasting enjoyment of art that may persist in his adult life.
6. Consolidation of the knowledge of previous artistic experiences.
7. Development of artistic sensibility at this transitional stage suited to his age group.
8. To make the work or art more functional in daily life.
9. Exploration of various media techniques.
10. Exploration of environment through observation.

PAPER-A

Time : 3 Hours

Paper-A

50 Marks

ART (DRAWING, PAINTING AND APPLIED ARTS)

Scale and Geometrical Drawing

1. **Scale Drawing** : Almirahs, Stool, Dressing Tables, Drawing Desks, Towel Stand, News Paper Stands, Pot Stands.
2. **Geometrical Drawing** : Polygons, Circles, Solid Geometry (Solid Geometry : There should be solid of squares, Prisms and Pyramids)

PAPER-B

Time : 3Hours

PRACTICAL

35 Marks

1. Composition or Applied Art (Poster Design or Illustrations)
2. Still Life : Making Drawing of the object placed at a distance to finish the drawing with light, shade and shadows (Not more than three objects).

18

17

1. One angular shape.
2. Round shape.
3. Fruits and vegetable.

**Media**

Dark Pencils, water colours, postal colours,tempera.

**Compositions**

Study of natural and made forms of human figures, animals etc. Out door sketching on daily life subjects like postman, milkman, watchman, folk stories,scenes of accidents, madari,snake charmers etc.

**Applied Art:**

Poster Design : based on the topics such as school activities, Drama, Annual function fete and fair and current issues etc.

**Illustrations** ; Based on daily life incidents, stories, poems, accidents, social activites etc.

Media Poster colour, water colours, ink and sketch pens etc.

**Note:** There will be two questions to do for the students in paper-B, One question on still life is compulsory.

#### **IV. METHODOLOGY OF TEACHING.**

The principal of "learning by doing" which forms the basis of the liberal methods of teaching art implies also self discovery through self expression for the child. Art therefore is training in seeing sensing, feeling and finally in doing. The instruction should revolve round the relationship of the child with his environment , both within and without. The teaching approach should be such as to provide to the child the maximum enrichment materials for developing his liking and understanding about them. At the middle school stage the art teacher, however, should avoid any direct instruction and should induce and motivate the pupil enough to let him mobilize his own resources to find cut appropriate means for self-expression, guidance in techniques should be indirect and inductive, although the child should be exposed to evaluate and appreciate works of art in his sphere of interest. More and more media should be introduced for his exploration and use in self expression. The secondary stage is a transitional period between the creative expression of childhood and the vocation-based training of the later period. The adolescent should be induced to acquire them as far as possible through exploration and discovery.

Teacher should encourage children's own initiatives, independent enquiry, thoughts and ideas by respecting their humble expressions.

Children should be exposed to variety of situations , materials and media for keener observation and close analysis.

Teacher being a guide and "adult child" is to help the children to plan their activities.

Teacher must see that all children participate in art activities in one way or the other and every child gets recognition of his deeds.

Over-emphasis on one or a few children's work and competition methods would hamper their imagination and sincere involvement because in order to get other's approval or appreciation the child would adopt show off tendency instead of exploring imagining and participating in the creative process.

## 12.MUSIC

### INTRODUCTION:

Music is performing art. The objective of this paper is to acquaint the student to know the background of our tradition and history. Our cultural background which reminds us of Gandharva Ved Music is a highly precious discipline of Vedic Science. A syllabus is meaningless unless it is taken in the right spirit. Today there is a tendency to have a short cut of everything and as a result music has suffered the most. Most of the students take up music as a hobby and do not want to go deep into the subject. Our country is a vast country and we have many spoken languages but it is only the music which unites us. Music cannot be learn only at schools and one must have further knowledge from various sources.

### (i) HINDUSTANI MUSIC (VOCAL)

|           |         |          |
|-----------|---------|----------|
| Theory    | 2 Hours | 25 Marks |
| Practical |         | 60 Marks |

### THEORY

1. Basic knowledge of the structure and tuning of Taanpura.
2. Knowledge of the notation systems laid down by Pt. Vishni Digamber and Pt. V.N. Bhatkhande.
3. Definition of Vadi, Samvadi, Anuvadi, Vivadi, Alap
4. Brief description of Natya Shastra, Sangeet Rantnakar.

### PRACTICAL

1. Community Singing:
  - (a) Two Songs in different regional languages.
  - (b) One Tagore song
2. Aaroha, Avaroha, Pakad and Drut Khyal in the following Ragas : Kafi, Khasmaj, Sarang and Desh with simple elaborations and few tanas:

**Prescribed Reference Books :** Sangeet Prakash : HP Bd. Of School Education

### Suggested Reference Books:

1. Kramik Pustak Malika by Pandit V.N. Bhatkhande
2. Rag Vigyan by Pandit V.N. Patwardhan.

**(ii) HINDUSTANI MUSIC (MELODIC INSTRUMENTS)**

|                  |                |                 |
|------------------|----------------|-----------------|
| <b>Theory</b>    | <b>2 Hours</b> | <b>25 Marks</b> |
| <b>Practical</b> |                | <b>60 Marks</b> |

**Theory**

1. Basic Knowledge of the structure and tuning of any one of the following instruments. (i) Sitar, (ii) Sarod, (iii) Violin, (iv) Dilruba or Esraj, (v) Flute, (vi) Mandolin, (vii) Guitar.
2. Knowledge of the notation system laid down by Pt. Vishnu Digamber Paluskar and Pt. V.N. Bhatkhande.
3. Vadi, Samvadi, Anuvadi, Vivdi, Alap
4. Brief description of Natya Shastra, Sangeet Ratnakar.

**Practical**

1. Eight Tala-babbha Alankaras set to different Talas.
2. Aaroha, Avaroha, Pakad and Drut gat in the following Ragas : Kafi, Khamaj, Sarang and Desh with simple elaborations and few Toras.

Prescribed Books : Sangeet Prakash : HP Bd. of School Education.

**Suggested Reference Books :**

1. Sitar Marg (1 Part) by Shri S. Bandyopadhyaya, Vani Mandir, Subzi Mandi, Delhi-7
2. Vitat Vadya Shiksha', by Shri S. Bandyopadhyaya, Vani Mandir, Subzi Mandi, Delhi-7
3. Sitar and its Technique by Prof. Debu Chaudhuri, Avon Publishers, Shahdara, Delhi.

## 13.COMMERCE

**Note : Any one of the following three areas can be offered :**

- I. Elements of Business **OR**
- II. Elements of Book Keeping and Accountancy **OR**
- III. Typewriting-English or Hindi

### (I) ELEMENTS OF BUSINESS

**Objective :** The objective of this paper is to provide elementary knowledge of the different aspects of business.

| One Paper | 3 Hours   | 85 Marks        |
|-----------|---|-----------------|
| I.        | Office Routine: Different departments of Business: establishment, handling inward and outward mail, Filing and indexing methods, copying and duplication methods.       | <b>17 marks</b> |
| II.       | Business Correspondence : Essential forms of a good business letter, writing of simple business letters of enquiry, quotations, order, reference, advice and complaints | <b>17 marks</b> |
| III.      | Banks: Functions of a Bank, Kinds of accounts and their operation; bank drafts, traveler's cheques, Post Office Saving Bank.  | <b>17 marks</b> |
| IV.       | Negotiable Instruments: Nature, kinds of cheques, endorsement, crossing, dishonoring of a cheque.   | <b>17 marks</b> |
| V.        | Bills of Exchange: Kinds, parties, negotiation, endorsing dishonoring, Promissory notes and Hundies.  | <b>17 marks</b> |

**OR**

### (II) Elements of Book-keeping and Accountancy

| One Paper | 3 Hours  | 85 marks        |
|-----------|--|-----------------|
| I.        | Final Accounts : Preparation of Trading and Profit and Loss Account and Balance Sheet of a sole trader with simple adjustments.  | <b>17 marks</b> |
| II.       | Bank Reconciliation Statement : Utility and Preparation; preparation of Cash Book with discount and Bank columns   | <b>17 marks</b> |
| III.      | Bills of Exchange : Nature and use of bills of exchange and promissory notes : Recording transactions pertaining to drawing, discounting, retiring, dishonoring and renewing of bills of exchange. | <b>17 marks</b> |
| IV.       | Errors and their Rectification : Types of errors and entries for their rectification.  | <b>17 marks</b> |
| V.        | Depreciation : Objects and methods-Straight line and Diminishing Balance methods   | <b>17marks</b>  |

OR

**(III) Type Writing-(English or Hindi)**

Due to speedy industrialization and rapid means of communication, the use of labour saving devices is on the increase. Typewriting is one of the most commonly used labour saving devices even in remote towns. Its relevance is more pronounced in developing countries where other sophisticated labour saving devices are not available. HPBOSE has decided to include the subject "Typewriting-English or Hindi" as an Elective at the Secondary level. This step has made the Scheme of Studies job oriented and need based.

**Objectives**

To help the learner understand the mechanism of the typewriter.

To enable the learner understand methods of typewriting.

To help the learner know the symbols used in proof-correction.

To enable the learner acquire the skills of proper display of mater like margin setting, centering and tabulation.

To help the learner acquire skills of typing and cutting stencils with speed and accuracy.

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|                         |                |                 |
|-------------------------|----------------|-----------------|
| <b>One Theory Paper</b> | <b>2 Hours</b> | <b>25 marks</b> |
|-------------------------|----------------|-----------------|

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1. Functions of important parts of Typewriter.
2. Elementary knowledge about display of letters and tabulation margin setting, centering, headings, subheadings.
3. Knowledge of cutting stencils and use of correcting fluid.
4. Simple proof correction symbols.
5. Standard abbreviations.
6. Speed development exercises.

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|                        |                |                 |
|------------------------|----------------|-----------------|
| <b>Practical Paper</b> | <b>1 Hours</b> | <b>60 marks</b> |
|------------------------|----------------|-----------------|

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**(A) Running Matter-A Speed and Accuracy Test**

**Marks- 24      Time 10 Minutes**

(A Passage of 300 words @ 30 w.p.m. in English and 250 words @ w.p.m. in Hindi. The same passage to be repeated, if finished before time)

**(B) Tabulation Test**

**Marks 36      Time 40 Minutes**

(A Tabular statement having not more than 3-4 rows and columns horizontally and vertically. The same is applicable for Hindi Typewriting also)

## 14.HOME SCIENCE

**One Theory Paper**

**3 Hours**

**60 Marks**

### Introduction :

Home Science is an elective subject of study in Class X. The subject aims at providing a preparation for the home and covers essential ground in the following areas:

- (1) Food, Nutrition and Cookery.
- (2) Textiles, and Needlework.
- (3) Home Management and Decoration.
- (4) Home Nursing and Child Development.

### Objectives

- (1) To provide training for a happy and healthy family and social life.
- (2) To impart skills which would be helpful for the students to be responsible house hold managers.
- (3) To understand the importance of nutrition in relation to health of an individual.
- (4) To develop a sensitivity in children regarding the correct selection of food in terms of nutritive values and cost.
- (5) To have an understanding of the limited food resources and how to get optimum amount of nourishment from them.
- (6) To impart the children elementary knowledge about home nursing, child development and home management.

## HOME SCIENCE (OLD)

**(A) THEORY ON PAPER**

**3 HOURS**

**60 Marks**

### 1. COOKERY:

- (1) Balanced diet ; food groups; Principles of Meal planning ; catering.
- (2) Causes of deterioration in food and methods of food preservation in home.

### 2. LOUNDRY AND NEEDLE WORK

- (1) Care and storage of fabrics synthetic, cotton, silk and wool.
- (2) The laundry room, laundry equipment and cleansing materials.
- (3) Washing and finishing of cotton and woolen clothes.

### 3. HOME MANAGEMNET

- (1) Principles of interior decoration.

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- (2) Selection of suitable furniture, fittings and simple articles of decoration; color combinations, arrange of flowers and pictures.

#### **4. HOME NURSING AND CHILD DEVELOPMENT**

- (1) Principles of Child Development, Physical and emotional needs of the growing child.
- (2) Formation of habits: Eating, sleeping, toilet training, exercise and play habits.

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| <b>(B) PRACTICAL ONE PAPER</b> | <b>3 HOURS</b> | <b>25 Marks</b> |
|--------------------------------|----------------|-----------------|
|--------------------------------|----------------|-----------------|

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- (1) Preparation of lunch and breakfast: Table setting.
- (2) Preparation of Jam and Pickle.
- (3) Preparation of a household chest of medicines.
- (4) Washing and finishing of cotton and woolen clothes.
- (5) Preparation of two articles of decoration (One Knitted).
- (6) Changing the safety valve of the Pressure Cooker.
- (7) Preparation of two charts.
- (8) Keeping records of Practical work done in the class.

#### **5. METHODS AND TECHNIQUES OF TEACHING**

Each lesson should be well-planned by the teacher. Whatever is taught should be related to appropriate demonstration, example, illustration or practical work. Students should be helped to arrive at their own conclusion. Experimental approach is recommended. The teacher is also advised to make available a variety of booklets and other reading material on different aspect of the subject for study by the student. Where necessary, a local expert may be brought to the classroom to demonstrate and explain a particular process or activity. Recapitulation can be arranged in a variety of ways. Outdoor activities should be preplanned. Internal assessment charts should be maintained with care. The teacher should also ensure a well equipped laboratory in the school.

#### **Prescribed Books:**

Grih Vijyan by HPBOSE Dharamshala

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## 15.Computer Science

|        |  |
|--------|--|
| CS-201 | <b>Digital Literacy (Advanced):</b><br>Handling of Over head Projectors, Digital Screens (LED, LCD and plasma), and Digital graphic plotters, Different type of Printers, Fax Machines, and Speakers etc.  |
| CS-202 | <b>Network and Internet Concepts:</b><br>Introduction to Network, Classification of Networking (LAN, MAN, WAN, PAN), Differences of Networks.<br>Introduction to internet, History of Internet, Types of Web Browsers-Internet explorer, Google chrome, Opera, Mozilla Firefox and browsing internet through various search engines such as Google, Yahoo, Bing etc. E-mail.   |
| CS-203 | <b>Digital Documentation- Word Processing (Advanced) :</b><br>MS-Word: Introduction to Word Processor, Creating, Saving, Opening and Print & Print Preview, Closing of Document. Inserting word art , clip art and pictures , pages setting, Super Script and Sub Script, Inserting Symbols Bullets and Numbering , border and shading , format painter , Find and Replace , inserting table, inserting , deleting , rows and column , merging cells , splitting cells using auto format, mail merge.  |
| CS-204 | <b>Digital Data Tabulation-Spreadsheet :</b><br>MS-Excel: Introduction and Concepts of Spread Sheet and Workbook. Creating, Saving, Opening and Print & Print Preview, Closing of Spreadsheet. Entering Numbers, Text, Date and Time, Series using Auto fill, Editing and formatting of Worksheet including changing color ,size, font, alignment of text, inserting and deleting cells, Row and columns , entering formula in cell using operator (+,-,x,/) etc. Relative referencing , absolute referencing and mixed referencing, using statistical functions :<br>SUM(), AVG(), MAX(), MIN(), IF() with compound statements, inserting tables in worksheet , embedding charts of various types (Lines , pie , bar, column, area) in worksheet , using macros in worksheet. |
| CS-205 | <b>Practical or Project Work (10% of 200Hrs.)</b>  |

### DISTRIBUTION OF TIME/PERIODS

| Module Code  | Name of Unit                        | Theory Hours | Practical Hours | Total Hours |
|--------------|-------------------------------------|--------------|-----------------|-------------|
| CS – 201     | Digital Literacy (Advanced)         | 07           | 08              | 15          |
| CS – 202     | Network and Internet Concepts       | 08           | 12              | 20          |
| CS – 203     | Digital Documentation (Advanced)    | 10           | 16              | 26          |
| CS – 204     | Digital Data Tabulation-Spreadsheet | 15           | 24              | 39          |
| CS – 205     | Practical/Project Work              | 0            | 15              | 15          |
| <b>Total</b> |                                     | <b>40</b>    | <b>75</b>       | <b>115</b>  |

### DISTRIBUTION OF MARKS

| Unit                               | Theory    | Practical | INA       | Total      |
|------------------------------------|-----------|-----------|-----------|------------|
| CS-201                             | 06        | --        | --        | 06         |
| CS-202                             | 08        | 12        | --        | 20         |
| CS-203                             | 12        | 20        | --        | 32         |
| CS-204                             | 09        | 08        | --        | 17         |
| CS-205<br>(Practical/Project Work) | --        | 05        | --        | 05         |
| Viva Voce                          | --        | 05        | --        | 05         |
| INA                                | --        | --        | 15        | 15         |
| <b>TOTAL</b>                       | <b>35</b> | <b>50</b> | <b>15</b> | <b>100</b> |

## 16.ECOMONICS

### INTRODUCTION:

Socio-economic changes take place rapidly in our developing society. An understanding of the economic forces which influence our daily life is essential for a successful living. Elementary knowledge of Economics has; therefore, been introduced in the new curriculum as an elective subject in Class X.

The approach in the teaching of the subject at this stage is not to emphasize the principles of economics so much as the current problems and issues that affect the everyday life of the common man. Some of these current problems relate to the influence of natural resources, agriculture and industry on our economic life, the role of the Government in economic development, and the crucial issues of population, the unemployment and price trends in the context of India economy. An introductory course of this type would provide necessary preparation for a more systematic course at the higher secondary stage.

### OBJECTIVES:

#### (A) General Objectives :

1. To provide an intelligent understanding of various economic problems of country and the state of the students and help them to understand the efforts being made to solve them.
2. To give an insight into the special problems of the development of hill areas of Himachal Pradesh and to inculcate in them attitude towards conservation and proper use of the scarce natural resources.

#### (B) Specific Objectives :

1. To acquaint students with the contemporary economic problems and to help them appreciate the efforts being made to solve these problems at local and national levels.
2. To foster an urge among students for effective participation in the tasks of national reconstruction.