

MATHEMATICS

One paper

3 hours

100 Marks

Units

Marks

1. Algebra	28
2. Commercial Mathematics	10
3. Mensuration	12
4. Trigonometry	15
5. Geometry	25
6. Statistics	10

Unit wise Weightage

Unit I : Algebra

Linear equations in two variables

Linear equations in two variables and its graph system of two linear equations in two variables solution of the system of equations by graphical and algebraic methods-consistency/inconsistency of the equations, applications involving the system of equations from different areas.

Rational expressions

G.C.D. & L.C.M. of polynomials by factorization method, meaning of a rational expression, addition, subtraction, multiplication of rational expressions.

Factorization of expressions using remainder theorem ratio and proportion, their Properties and applications

Quadratic Equation:

Meaning and standard form of a quadric equation $ax^2 + bx + c = 0$; ($a \neq 0$). Solution of $ax^2 + bx + c = 0$; ($a \neq 0$), (i) by factorization (ii) by quadratic formula; discriminate of the quadratic equation and nature of the roots, formation of the quadratic equations with given roots, applications involving quadratic equation from several areas. Solution of equation reducible to quadratic form, factorization of quadratic polynomials by using quadratic formula (when other methods are not easily applicable).

Unit 2 : Commercial mathematics

Banking

Working of Banks and different types of accounts (saving Bank account, Recurring deposit account) problems.

The teacher is expected to devote some time in telling the students as to how Banking system evolved to its present form. More emphasis should be laid on problem solving in saving Bank Accounts.

Taxes:

The main objective of this unit is to acquaint the students with the concepts of national economy with special reference to different forms of taxes.

Direct taxes and indirect taxes, Computation of Income Tax, Sales Tax.

The teacher is expected to give sufficient practice in solving problems involving Income Tax and sales Tax only.

Unit 3:- MENSURATION-I

Area

Computation of area of (i) Different types of triangles, (ii) Square, (iii) rhombus (iv) rectangle and solving problems based on measurement of area like finding altitudes, perimeter, computation of area of polygon and problems based on area like finding perimeter, angle, cost of flooring etc.

Field Book

Drawing a field book on the base of a given data. Computing area of the field and solving problems based on area. Area of shapes like circle, sector and segment of circle. Computation of area of shapes circle, sector and segment of circle using.

Formulae and solving problems based on area, like finding cost of fencing, etc.

MENSURATION –II

Volume

- Computation of volume of a cube, cuboids, surface area and volume of cylindrical shapes and solving problems based on it.
- Computation of surface area and volume of a cone and solving problems based on it.
- Computation of surface area and volume of a sphere and solving problems based on it.

Unit-4 : Trigonometry

Trigonometrical Identities.

$$\sin^2 A + \cos^2 A = 1; \sec^2 A = 1 + \tan^2 A; \operatorname{cosec}^2 A = 1 + \cot^2 A$$

Proving simple identities based upon the above:

Trigonometrical ratio of complementary angles.

$$\sin (90^\circ - A) = \cos A, \operatorname{cosec} (90^\circ - A) = \sec A.$$

$$\cos (90^\circ - A) = \sin A, \sec A (90^\circ - A) = \operatorname{cosec} A.$$

$$\tan A (90^\circ - A) = \cot A, \cot A (90^\circ - A) = \tan A.$$

Simple problems based upon the same.

Height and Distance

Solving Problems and find

Angle of elevation, angle of depression. Computing heights of given objects and distances on the basis of given data using trigonometric ratio/identities (for values of trigonometric ratio use trigonometric tables and log tables.)

Unit 5 : Geometry

In the teaching of geometry at the secondary level, the emphases should be to make the pupils understand and appreciate the nature of method of a deductive proof. The proofs of only the star-marked proposition may be asked in the Broad Examination. In order to achieve the objectives of teaching geometry, the solving of riders (Exercises) covering all the propositions should be emphasised.

Similar Triangles:

1. If a line is drawn parallel to one side of a triangle, the other two sides are divided in the same ratio.
2. If a line divides any two sides of a triangle in the same ratio, the line must be parallel to the third side.
3. If in two triangles, the corresponding angles are equal (i.e. the two triangles are equiangular) their corresponding sides are proportional.
4. If corresponding sides of two triangles are proportional then the triangles are similar.
5. If the corresponding sides of two triangles are proportional, the triangles are equiangular.
6. If in two triangles, one pair of corresponding sides are proportional and the including angles are equal then the two triangles are similar.
7. If a perpendicular is drawn from the vertex of the right angles of a right angled triangle to the hypotenuse, the triangles on each side of the perpendicular are similar to the whole triangle and each other. The ratio of the areas of similar triangles is equal to the ratio of the squares on the corresponding sides.
8. In a right triangle, the square on the hypotenuse is equal to the sum of the squares on the other two sides.
9. In a triangle, if the square on the one side is equal to the sum of the squares on the remaining two sides, the angle opposite the first side is a right angle.

Circle:

1. If two arcs of a circle are congruent, their corresponding chords are equal.
2. If two chords of a circle are equal, then their corresponding arcs are congruent.
3. The perpendicular from the centre of a circle to a chord bisects the chord.

4. The line joining the centre of a circle to a chord bisects the chord.
5. There is one and only one circle passing through three given non-collinear points.
6. Equal chords of a circle (or of congruent circle) are equidistant from the centres.
7. Chords of a circle (or of congruent circle) that are equidistant from the centers are equal.
8. The degree measured of an arc of a circle is twice the angle subtended by it an any point of the alternate segments of circle with respect to the arc.
9. The angle in a semicircle is a right angle.
10. The arc of a circle subtending a right angle at any point of the circle in its alternate segment is a semicircle.
11. Angles in the same segment of a circle are equal.
12. If a line segment joining two points subtends equal angles at two other points lying on the same side of the line containing the segment, the four points lies on the same circle
13. Equal chords of a circle subtend equal angles at the centre.
14. If the angles subtended by two chords of a circle at the centre are equal, the chords are equal.
15. The sum of either pair of opposite angles of a cyclic quadrilateral is 180° .
16. If the sum of any pair of opposite angles of a quadrilateral is 180° , then the quadrilateral is cyclic.
17. A tangents at any point of a circle is perpendicular to the radius through the point of contact.
18. The lengths of the two tangents drawn from an external point to a circle are equal.
19. If two chords of a circle intersect inside or outside the circle then the rectangle formed by the two parts of a chords is equal in area to the rectangle formed by the two parts of the other.
20. If PAB is a secant to a circle intersecting the circle at A and B and PT is a tangent at T, then $PA \times PB = PT^2$.
21. If a chords is drawn through the point of contact of a tangent to a circle then the angles which this chords makes with the given tangent are equal respectively to the angles formed in the corresponding alternate segments.
22. If a line is drawn through an end point of chords of circle so that the angle formed with the chord is equal to the angle subtended by the chord in the alternate segment, then the line is a tangent to the circle.
23. If two circles touch each other (internally or externally) the point of contact lies on the lines through the centres.

Construction :

1. Construction of tangent to a circle at a given point on the circle when the centre is (I) Known (ii) Unknown.
2. Construction of a triangle, given base, vertical angle and either altitude or median through vertex.
3. Construction of figures (triangles, quadrilateral, etc.) similar to the given figures as per the given scale factor.
4. Division of a given line segments, internally/externally in a given ratio.

Unit 6: Statistics

Arithmetic mean, Computed-from ungrouped data, Arithmetic mean from grouped data, Short-cut method for computing the mean, Weighted mean, Median from ungrouped Data, Vital statistics and Index number.

Prescribed Book: -

1. **Mathematics:-** A textbook for secondary schools, Class X, Published by J&K Board Of School Education.

COURSE WORK **(ASSIGNMENT/PROJECT WORK)**

While unit tests and term tests to be conducted by the schools under the scheme of continuous and comprehensive Evaluation are for testwiseness and coaching

Students for the board Examinations, the course work components have been designed to provide schools with an alternative means of assessment of those objectives which lend themselves to testing by means other than timed written papers. The course work is intended to provide a framework for developing an ability to solve problems for encouraging investigational activities. The course work component allows particular emphasis on objectives, which are difficult to test in timed written papers. However, appropriate course work should cover many of the objectives to greater extent.

Procedure:

1. It is recommended that all candidates should submit one project and one investigation to be assessed by the teachers. The grades award should be communicated to the Board.
2. Course work shall involve 15 hours work and class time should be allocated accordingly so that the teacher is able to monitor candidates work. Candidates should be encouraged to devote time outside the class room to collect data and do other tasks associated with the assignment.

Assignments :

The following headings may be helpful in considering the choice of assignments for course works:

- A. Mensuration. B. Banking and Taxation. C. Geometry.

Suggested Topics:

- A. Finding area of classrooms, school campus, making projects indicating cost of fencing / walling, etc.
- B. Functions of bank, procedure to get loans for self employment; making a project for starting some business, etc.
- C. Scale drawing, Maps / Models making, etc.

SCHEME OF ASSESSMENT

I. BOARD EXAMINATION

The question paper shall be of 100 marks and three hours duration.

Domain to be tested: Techniques with applications.

1. The question paper shall contain questions of variable mark allocations as given below:

- | | |
|--|--------------------------|
| ❖ 4 questions of 10 marks each; | $4 \times 10 = 40$ marks |
| ❖ 8 questions of 5 marks each; | $8 \times 5 = 40$ marks |
| ❖ 5 questions of 3 marks each; | $5 \times 3 = 15$ marks |
| ❖ 5 multiple choice questions (items) of 01 mark each. | $5 \times 1 = 05$ marks |

Note:- 10, 05 and 03 mark questions may contain component of different mark allocations; say a question may have two or three parts of variable mark allocations. There shall be internal and parallel choice in case of four 10 mark questions and eight 05 – mark questions and No choice in case of 03 and 01 – mark questions. Questions of 10 mark allocations shall generally be based on geometry and mensuration.

2. The student can use a simple electronic calculator. Electronic calculators having exponential and trigonometric functions shall not be allowed. Use of such calculators shall tantamount to using unfair-means.
3. Trigonometric/ log tables, if required, shall be provided by the Board. No other mathematical or statistical tables will be allowed to be used.
4. Three significant figures in answers will be required except where otherwise stated.

II. SCHOOL BASED ASSESSMENT

The course work will be assessed internally by the schools as per guidelines contained in the scheme of Continuous and Comprehensive Evaluation and instructions issued by the Board.

BOOK PRESCRIBED

Mathematics: - *A textbook for class X, published by J&K State Board of School Education.*

SOCIAL SCIENCE

There shall be two papers of 100 marks i.e History & Civics paper I and Geography paper II. Duration of History and Civics paper is of 2 ½ hours and Geography paper is of 1 ½ hour.

The weighting of different sections is given below :

History	—	40 marks
Civics	—	20 marks
Geography	—	40 marks

SECTION-I

HISTORY

AIMS:

1. To arouse interest in and enthusiasm for the study of the past;
2. To promote the acquisition of knowledge and understanding of human activity in the past, linking it, as appropriate, with present;
3. To ensure that candidate's knowledge is rooted in an understanding of the nature and use of historical evidence.
4. To help towards understanding of the development, over time, of social and cultural values;
5. To promote understanding of nature of cause and consequence, continuity and change, similarity and difference;
6. To promote understanding of those aspects of Indian historical development which are necessary to know and understand;

DOMAINS

(Assessment objectives)

Students should be able to:

1. recall, select and use relevant knowledge and communicate it in coherent form,
2. to demonstrate understanding of historical terminology and concepts/s. (Cause and consequence, change and continuity, similarity and difference)
3. to interpret and evaluate a wide range of historical source and their uses as evidence viz.
 - (i) to comprehend
 - (ii) to locate an extract relevant information
 - (iii) to distinguish between fact, opinion and judgment,
 - (iv) to indicate deficiencies, such as gaps and inconsistencies;
 - (v) to detect bias,
 - (vi) to compare and contrast a range of sources and to reach conclusions based upon their use as evidence.

SOCIAL SCIENCE

(PAPER-I)

Marks : 60

Time : 2½ Hours

SECTION-I (HISTORY)

Weightage : 40 Marks

Units	Marks
I Imperialism	10
II British Rule	10
III India's Struggle for Freedom	10
IV Gandhian Phase	10

Paper-A (History & Civics)

Section 'A'

Marks : 40

UNIT-I : Imperialism

10 Marks

- (i) Imperialism :- Meaning, Causes and its impact on Asia and Africa.
- (ii) The First World War :- Causes, Events and Consequences.
- (iii) The Russian Revolution:- Causes and Impact.
- (iv) Fascism in Italy and Nazism in Germany.
- (v) The 2nd World War: Causes and Consequences.
- (vi) Chinese Revolution: Significance.

Unit – II : British Rule

10 Marks

- (i) British Rule and its impact on India.
- (ii) Socio- Religious Reform Movements.
Brahmo Samaj, Arya Samaj, Rama Krishna Mission, Aligarh Movement and Deoband Movement.
- (iii) Growth of Education.
- (iv) Growth of Press in the 19th Century.

UNIT- III: India's Struggle for Freedom

10 Marks

- (i) Revolt of 1857 – Causes and Effects.
- (ii) Rise of National Movement – Factors.
- (iii) Formation of the Indian National Congress in 1885 and Role of Moderates.

- (iv) Factors leading in the rise of Extremism in the Congress with Special reference to the Partition of Bengal.
- (v) Boycott and Swadeshi Movement.
- (vi) Rise of Muslim League in 1906: Causes.

Unit-IV : Gandhian Phase

10 Marks

- (i) Jallianwalla Bagh
- (ii) Khilafat Movement and the Non- Cooperation Movement.
- (iii) From Swaraj to the Independence Movement.
- (iv) Civil Disobedience Movement.
- (v) Quit India Movement.
- (vi) Independence and Partition of India.

ASSESSMENT:

- (i) No of 8- mark questions with internal and parallel choice = 2 ; $2 \times 8 = 16$ marks
 - (ii) No of 5- mark questions with internal and parallel choice = 2; $2 \times 5 = 10$ marks
 - (iii) No. of 3- mark short answer questions = 2 ; $2 \times 3 = 6$ marks
 - (iv) No. of 1- mark very short answer questions = 4 ; $1 \times 4 = 4$ marks
 - (v) No. of 1- mark multiple choice items = 4 ; $1 \times 4 = 4$ marks
- Total = 40 marks

CIVICS

AIMS:

1. To promote desire to participate in community affairs.
2. To understand the structure of different civic and political Institutions.
3. To encourage a critical awareness of social, economic and political arrangements and their effects.

DOMAINS

Candidates should be able to:

1. Demonstrate knowledge and understanding of
 - (a) Factual information
 - (b) Concepts and terminology.
2. Demonstrate the ability to-
 - (a) Understand and apply concepts.
 - (b) Distinguish between facts and values and identify slanted values and bias.
3. Demonstrate the ability to present explanations, ideas and arguments in a coherent, logical and balanced form.

SECTION –B (CIVICS)

Marks : 20

Unit 1. Democracy

3 marks

- 1.1 Origin of democracy
- 1.2 Types
 - 1.2.1 Direct democracy
 - 1.2.2 Indirect democracy
- 1.3 Hindrance to democracy
- 1.4 Public opinion

Unit 2. Elections

5 marks

- 2.1 Representation.
- 2.2 Franchise.
- 2.3 Secret Ballot.
- 2.4 Candidates.
- 2.5 Nomination.
- 2.6 Symbol.
- 2.7 The Campaign.
- 2.8 The majority.
- 2.9 Presidential elections.

(Unit 3 and unit 4)

6 marks

Unit 3. Political Parties

- 3.1 Functions.
- 3.2 Types.
- 3.3 Party system.
 - 3.3.1 The multi-party system.
 - 3.3.2 Major parties.
 - 3.3.3 Opposition.

Unit 4. Our Nation and Society

- 4.1 The Indian Society.
 - 4.1.1 Languages.
 - 4.1.3 Cities and villages.

(Unit 5 and Unit 6)

6 marks

Unit 5. Problems of Indian Democracy

- 5.1 Communalism.
- 5.2 Casteism and Untouchability.
- 5.3 Inequality of women.
- 5.4 Economic inequality.

Unit 6. India and the world

- 6.1 The United Nations.
- 6.2 Non- alignment.
- 6.3 India's relations with her Neighbours

GEOGRAPHY (PAPER-II)

AIMS:

The aims are to encourage students to develop—

1. a sense of place and an understanding of relative location on a local, regional and global scale;
2. an awareness of the characteristic and distribution of a selection of contrasting physical and human environments;
3. an understanding some of the processes effecting the development of such environments ;
4. an understanding of the spatial effects of the ways in which people interact with each other and with their environments;
5. an understanding of different communities and culture through out the world and an awareness of the constraints presented by different environments.

DOMAINS

The four domains in geography are:

- (a) Knowledge with understanding.
- (b) Analysis.
- (c) Judgment and decision making.
- (d) Investigation (enquiry skills, practical skills and presentation skills).

A description of each domain follows :

(a) Knowledge with Understanding

Student should be able to demonstrate an understanding of:

1. The wide range of processes including human actions, contributing to the development of
 - (a) Physical, economic, social, political and cultural environments and their associated effects on the landscape;
 - (b) Spatial patterns and interactions which are important within such environment.
2. The inter-relationships between people's activities and the total environment and an ability to seek explanations for them;
3. The importance of scale (whether local, regional or global) and the time at which spatial distributions and the working of systems are considered;
4. The change which occur through time in places and spatial distribution.

(b) Analysis

Students should be able to:

5. select, organise, present and interpret geographical data;
6. use and apply geographical knowledge and understanding on verbal numerical, diagrammatic, pictorial and graphical form;
7. use geographical data to recognise patterns in such data and to deduce relationships.

(c) Judgment and Decision Making

Through their geographical training students should be able to

8. reason, make judgements (including evaluation and conclusions) which demonstrate, where appropriate
 - (a) a sensitivity to, and a concern for, landscape and the environment;
 - (b) an aesthetic, appreciation of the earth including its people, places, land -scapes, natural processes and phenomena;
 - (c) an appreciation of the attitudes, values and beliefs of other in cultural, economic, environmental, political and social issues which have a geographical dimensions;
 - (d) an awareness of the contrasting opportunities and constraints of people living in different places and under different physical and human conditions;
 - (e) a willingness to review their own attitude in the light of a new context as affected by
9. recognise the role of decision making within a geographical context as affected by
 - (a) the physical and human context in which decision are made;
 - (b) the values and perceptions of groups or individuals;
 - (c) the choice available to decision making and the influences and constraints with in which they operate.

(d) Investigations (Enquiry, Practical and Presentation skills)

Students will be expected to demonstrate the ability to the following:

10. select and use suitable basis techniques for observing, collecting, classifying, presenting, analysing and interpreting data;
11. use a variety of sources for obtaining information including
 - (a) maps and plans at a variety of scale.
 - (b) audiovisual materials such as pictures, photographs, film, television and radio.
 - (c) documentary materials such as books, newspaper and magazines.
 - (d) statistics;
12. depict information in a simple map and diagrammatic form,
13. select, use and present geographical information in an appropriate form and an effective manner.

GEOGRAPHY (PAPER-II)

Content Outline

Marks : 40

Time allowed : 1½ hrs

Distribution of Marks

Units	Marks
01 and 02	11
03	08
04	08
05	07
06	<u>06</u>
Total	<u>40</u>

Unit 01 : Our Resources

11 marks for Unit I & II

- 1.1 Types of Resources:
 - 1.1.1 Natural and Man-made resources
 - 1.1.2 Renewable & Non-renewable
- 1.2 Resource Development-Renewing & developing
- 1.3 Resource Planning
- 1.4 Conservation of Resources.
- 1.5 Land Resources.

Soil:

- 2.1 Composition of Soil.
- 2.2 Formation of Soil: factors responsible for formation of soil.
- 2.3 Profile of Soil.
 - 2.3.1 Different horizons of soil and their characteristics.
 - 2.3 Different types of soil (with special reference to soil types found in J&K)
- 2.4 Soil Erosion-
 - 2.4.1 Factors responsible for erosion of soil.
 - 2.4.2 Measures for preventing soil erosion.
- 3. Land utilization.
 - 3.1 Land degradation.
 - 3.2 Conservation of land.

Unit – 02 : Forest and Water Resources

- 4. Forest
 - 4.1 Types of forests (with special reference of J&K State).
 - 4.2 Conservation and protection of forests.
- 5. Wildlife.

- 5.1.1 National parks and wildlife sanctuaries (reference of J&K sanctuaries and National parks).
- 5.2 Conservation of wildlife.
- 6. Water.
 - 6.1 Water resources
 - 6.2 Sources of water (with special reference of J&K State).
 - 6.3 Uses of water resources.
 - 6.4 Multipurpose River valley projects-with special reference of J&K State.
 - 6.5 Distribution of irrigated Areas.
 - 6.6 Growing need for water.
 - 6.7 Conservation and management of water resources.
 - 6.8 Watershed development.
 - 6.9 Rainwater Harvesting.

Unit : 03

8 marks

- 7. Agriculture
 - 7.1 Land under Agriculture.
 - 7.2 Macro features of Indian Agriculture.
 - 7.3 Types of farming
 - 7.2.1 Subsistence farming
 - 7.2.2 Shifting Agriculture.
 - 7.2.3 Plantation Agriculture.
 - 7.2.4 Intensive fringing.
 - 7.3 Major crops and their varieties (reference of J&K incorporated)
 - 7.4 Cereals – Rice, Wheat, Millers, Maize.
 - 7.5 Pulses and oilseeds – Pulses, Oilseeds,
 - 7.6 Fibre crops.
 - 7.7 Beverage crops.
 - 7.8 Cash crops — sugarcane, Rubber, Tobacco, Spices, fruits including dry fruits, fresh fruits and saffron of J&K State.
 - 7.9 Animal Husbandry (also J&K livestock statistics).
 - 7.10 Fisheries.
 - 7.11 Technological and institutional reforms.
 - 7.12 Food security.
 - 7.13 Globalization and its impact on Indian Agriculture.

Unit: 04**8 marks**

- 8 Mineral and Energy Resources.
- 8.1 Type of Minerals.
- 8.2 Distribution of Minerals- Ironer, Manganese ore, copper, lead, Bauxite, Mica, Limestone- with special reference to J&K State.
- 8.3 Conservation of Minerals.
- 8.4 Energy Resources
- 8.5 Conventional sources of Energy- Coal, Petroleum, Natural Gas, Electricity, Hydro Electricity, nuclear Electricity.
- 8.6 Non-conventional sources of Energy- Solar Energy, Biogas .
- 8.7 Conservation of Energy Resources.

Unit: 05**7 marks**

- 9 Manufacturing Industries:
- 9.1 Classification of Industries
- 9.2 Agro-based Industries-Cotton Textiles, Jute Textiles ,Woolen Textiles, Silk Textiles.
- 9.3 Mineral Based Industries-Iron & Steel Industries, Aluminum Smelting, Copper Smelting.
- 9.4 Transport Equipment Industries.
- 9.5 Electronic Industries.
- 9.6 Measures to control environmental degradation.

Unit: 06**6 marks**

- 10 Transport Communication and Trade:
- 10.1 Transport.
- 10.2 Roads (different routs of J&K State)
- 10.3 Railways (with reference of J&K State).
- 10.4 Communications
- 10.5 International Trade.

Project Activities / Survey and Brief Report:-

- Sources of water in the locality and pollution (based on Secondary source of information).
- Various irrigation practices in the village and the change in cropping pattern of the land during the past decade.

Note: - Any one activity is to be undertaken :

- Depletion of forests and the green house effect.
- Depletion of forests and ecological imbalance.
- Pollution of water in the locality.

Learning Outcome :

This unit of Geography will enable the learners to

- (i) Understand the value of resources and the need for their judicious utilization and conservation.
- (ii) Understand the importance of forests and wildlife in our environment as well as develop concern towards depletion of resources.
- (iii) Identify various types of farming and discuss the farming methods.
- (iv) Describe the spatial distribution of major crops as well as understand the relations between rainfall regimes and cropping pattern.
- (v) Explain various government policies for institutional as well as technological reforms since independence.
- (vi) Understand the importance of agriculture in national economy.
- (vii) Understand the importance of water as a resource as well as develop awareness towards its judicious use and conservation.
- (viii) Discuss the importance of industries in the national economy as well as understand the regional disparities, which resulted due to concentration of industries in some areas.
- (ix) Explain the importance of transport and communication in the ever shrinking world.
- (x) Understand the role of trade in the economic development of a country and analyses the changing patterns.

Books prescribed:

- (i) Story of Civilization Vol. II
- (ii) Geography for class X.
- (iii) We and Our Govt.

Published by Jammu & Kashmir State Board of School Education.

COURSE WORK **in** **History and Civics** **School Based Assessment** **under** **Continuous and Comprehensive Evaluation**

While the unit test and term test conducted by the schools under the schemes of continuous and comprehensive Evaluation are for test-wise-ness and coaching for the Board Examination, the course work component has been designed to provide schools with alternative means of assessment of those objectives which can't be tested through timed written paper. It is also to allow students to study a topic /theme form out of the syllabus contents of History and Civics work on it to produce an essay/a report of 600-1000 words.

- Note :-** (i) Private students are exempted from undertaking course work.
(ii) The grades awarded to regular students who failed in social science shall be carried forward, while appearing afresh in the subject to pass the subject.

ASSESSMENT OF BOARD EXAMINATION

There shall be two papers of 100 marks. Paper I will of two & half hours duration containing two sections i.e section I of 40 marks for History: section II of 20 marks for Civics. Paper II will of one & half hour duration containing 40 marks for Geography.

Each section of the question Paper I shall contain questions of variable mark allocations as given below:

SECTION-I

- 1. History** **Marks : 40**
- (a) Two essay type (Long answer) questions each of 08 marks with internal and parallel choice. 2×8 = 16 marks
 - (b) Two long answer questions each of 05 marks requiring 100-150 words to answer with internal and parallel choice. 2×5 = 10 marks
 - (c) Two short answer questions each of 03 marks requiring 40-80 words to answer. 2×3 = 6 marks
 - (d) Four very short answer questions each of 01 mark requiring one or a few words to one or two simple sentence length answers 4×1 = 4 marks
 - (e) Four multiple choice questions each of 01 mark 4×1 = 4 marks

SECTION- II

- 2. Civics** **Marks : 20**
- (a) Two long answer questions each of 05 marks with internal and parallel choice requiring 100-150 words to answer. 2×5 = 10 marks
 - (b) Two short answer questions each of 03 marks requiring 40-80 words to answer. 2×3 = 6 marks
 - (c) Two very short answer questions each of 01 mark Requiring one a few words to one or two simple Sentences-length answers. 2×1 = 2 marks
 - (d) Two multiple-choice questions of 01 mark each. 2×1 = 2 marks

Paper 'B'

- 3. Geography** **Marks : 40**
- (a) Three Long answer questions each of 05 marks with internal And parallel choice. 3×5 = 15 marks
 - (b) Six short answer questions each of 03 marks requiring 40 – 80 words answer. 6×3 = 18 marks

- (c) Three very short answer questions each of 01 mark requiring one or a few words to one or two simple sentences length answers. $3 \times 1 = 3$ marks
- (d) Four multiple choice questions each of 01 marks. $4 \times 1 = 4$ marks

Note :

- (a) Out of 5 marks long answer questions one question shall be on map (s) with internal and parallel choice.
- (b) In case marks allocated to the unit on which map is based are more than 05 put 01. Marks question(s) raising weightage to the marks allocated to the unit.

SCHOOL BASED ASSESSMENT COURSE WORK UNDER
(Continuous and Comprehensive Evaluation)

Every regular student shall be required to produce two pieces of courses, one in Geography and one in the History and Civics. The course work shall be assessed in Grades internally by school with provision for internal/external moderation as per Scheme of continuous and comprehensive Evaluation and directions issued by board.

Books Prescribed:

- (i) Story of Civilization Vol. II.
(ii) Geography X.
(iii) We and our Government.

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MAASHI GEOGRAPHY

M. Marks : 40

Time : 1½ hrs

Syllabus of Maashi Geography (Urdu Version) for Class 10th

Unit-I	Physical Setting 1. Physical Features 2. India on the Globe 3. Climate.	12 marks
Unit-II	Our Natural Resources 1. The Flora, The Fauna and the Soil 2. Land use and Water Resources 3. Mineral and Power Resources.	10 marks
Unit-III	Agriculture & Industries 1. Agriculture 2. Industries	08 marks
Unit-IV	Transport, Communication and Trade	05 marks
Unit-V	Nurturing Human Resources 1. Human Resource Base	05 marks

SCIENCE

AIMS:

The aims are to:

1. Provide, through well designed studies of the experimental and practical science, a worthwhile educational experience for all students, whether or not they intend to go on to a study science beyond the secondary stage and in particular, to enable them to acquire sufficient understanding and knowledge to:
 - 1.1 become confident citizens in a technological world, and to take or develop an interest in matters of scientific importance.
 - 1.2 recognize the usefulness, and limitations of scientific method and to appreciate its applicability in other disciplines and in everyday life.
 - 1.3 be suitably prepared for studies beyond the Secondary stage in pure sciences, in applied sciences or in science-dependent course.
- 2. Develop abilities and skills that:**
 - 1.1 are relevant to the study and practice of science
 - 1.2 are useful in everyday life,
 - 1.3 encourage efficient and safe practice,
 - 1.4 encourage effective communication,
- 3. Develop attitude relevant to science such as :**
 - 3.1 concern for accuracy and precision,
 - 3.2 objectivity,
 - 3.3 integrity,
 - 3.4 enquiry,
 - 3.5 initiative,
 - 3.6 inventiveness.
- 4. Stimulate interest in, and care for, the environment**
- 5. Promote an awareness that:**
 - 5.1 scientific theories and methods have developed, and continue to do so, as a result of co-operative activities of groups and individuals.
 - 5.2 the study and practice of science are subject to social, economic, technological, ethical and cultural influences and limitations.
 - 5.3 the application of science may be both beneficial and detrimental to the individual, the community and the environment.
 - 5.4 Science transcends national boundaries and that the language of science, correctly and rigorously applied, is universal.

DOMAINS

The three domains in Science (Physics, Chemistry and Life Sciences) are;

- (a) Knowledge with understanding.
- (b) Handling information and solving problems.
- (c) Experimental skills an investigations.

Description of each domain is given below:

(a) Knowledge with Understanding

Students should be able to demonstrate knowledge and understanding in relation to:

1. Scientific phenomena, facts, laws, definitions, concepts, theories;
2. Scientific vocabulary, terminology, conventions (including symbols, quantities and units),
3. Scientific instruments and apparatus, including techniques of operation and aspects of safety.
4. Scientific quantities and their determination.
5. Scientific and technological applications with their social economic and environmental implications.

The curriculum objectives define the factual material that candidates may be required to recall and explain. Question testing these objectives will often begin with one of the following words: define, state, describe explain or outline etc.

(b) Handling information and Solving Problems

Students should be able, in words or using other written forms of presentation (i.e. symbolic, graphical and numerical)

1. locate, select, organise and present information from a variety of sources;
2. translate information from one to another;
3. manipulate numerical and other data;
4. use information to identify patterns, report trends and draw inferences;
5. present reasoned explanations for phenomena, patterns and relationships;
6. make predictions and hypotheses;
7. solve problems;

These skills cannot be precisely specified in the curriculum objectives because question testing such skills are often based on information which is unfamiliar to the candidate. In answering such question, candidates are required to use principles and concepts that are within the syllabus and apply them in a logical, deductive manner to a novel situation.

Question testing these skills will often being with one of the following words:

Discuss, predict, suggest, calculate or determine etc.

(c) Experimental Skills and Investigations

Students should be able to:

1. use techniques, apparatus and materials (including the following of a sequence of instructions where appropriate).
2. make and record observations, measurements and estimates;
3. interpret and evaluate experimental observations and data;
4. plan, investigation and /or evaluate methods and suggest possible improvements (including the selection of techniques, apparatus and materials).

SCIENCE

Theory

Paper A (Physics & Chemistry)

Section-I (PHYSICS)

Marks 28

Marks 56 (Phy.+Chem. 28+28)

Time Allotted: 2½ Hours

Unit 1 Light – Reflection and Refraction: -

Periods 22/ Marks 10

- Reflection of light, spherical mirrors; Image formation; uses of spherical mirrors.
- Sign conventions for spherical mirrors; relation between focal length and radius of curvature; mirror formula (only relation) (Numerical Problems); magnification.
- Refraction of light, refraction through a glass slab, refractive index, Conditions for no refraction.
- Spherical lenses, image formation, sign conventions, lens formula (only relation) (Numerical Problems), Magnification (Numerical Problems), Power of a lenses (Numerical Problems)

Unit 2:- The Human Eye and the Colorful World.

Periods 10 /Marks 05

- Human eye; power of accommodation; defects of vision and their correction.
- Glass prism (refraction and dispersion).
- Atmospheric refraction – twinkling of stars and color of sun at sunrise and sunset.

Unit 3:- Electricity

Periods 12 /Marks 6.

- Concept of electric charge;
- Electric current ; electric potential and potential difference ;
- Ohm's law and experimental verification; resistance and its dependence; combination of resistances(in series and in parallel) (Numerical Problems)
- Heating effect of current- Electric power and energy (Numerical Problems)

Unit -4:-Magnetic Effects of Current: -

Periods 09/Marks 04

- Orested Experiment; Magnetic field and field lines.
- Magnetic field due to a current carrying current-Straight, coil (loop) and solenoid (qualitative only).
- Force on a current carrying conductor in a magnetic field.
- Electric Motor; Domestic electric circuits.

Unit-5:- Sources of Energy:

Periods 07/Marks 03

- Various sources of energy; Conventional sources of energy; improvement in technology for using conventional sources of energy (Biomass and wind energy).
- Non- conventional sources of energy (Solar energy, Energy from sea).
- Nuclear energy (Nuclear fusion and nuclear fission).
- Lasting of energy sources.

Section II- (Chemistry)

Marks 28

Unit -1: Chemical Reactions and Equation Periods 11/ Marks 05

- Chemical equation, writing of chemical equation; Balancing chemical equations.
- Types of chemical reactions; viz. Combination reactions; Decomposition reactions; Displacement reactions; Double displacement reactions; Oxidation and reduction.
- Effects of oxidation and reduction reactions in everyday life, viz. corrosion and rancidity.

Unit -2: Periodic Classification of Elements Periods 08/Marks 04

- Early attempts regarding classification of elements; like O' Dobernier triads, New lands law of octaves(non evaluating)
- Mandeleev's periodic table its achievements and limitations.
- Modern periodic table; position of elements trends in modern periodic table viz. valency, Atomic size, Metallic and non-metallic properties.

Unit- 3: Carbon and its compounds Periods17/Marks 08

- Bonding in Carbon, Covalent bond, Allotropes of carbon;
- Versatile nature of carbon; Saturated and unsaturated hydrocarbons; chains; Branches and rings; homologous series and its characteristics; nomenclature of Carbon compounds.
- Chemical properties of carbon compounds viz. combustion; oxidation; Addition and substitution reactions.
- Important Carbon compounds like Ethane and Ethanoic acid. Properties of Ethanol and Ethanoic acid.
- Soaps and Detergents.

Unit- 4: Metals and non-metals Periods13/ Marks 06

- Physical properties of metals and non-metals.
- Chemical properties of metals like action of water, air, acids, salts; Reactivity series of metals.
- Cause of reactivity of metals and non-metals. Properties of Ionic compounds.
- Occurrence of metals; their extraction, enrichment of ores. Extraction of metals in accordance with activity series; refining of metals.
- Corrosion of metals and its prevention

Unit -5: Acids bases and salts Periods 11/ Marks 05

- Idea about acids and bases; chemical properties of acids and bases viz. Action of metals, metal carbonates, metal hydrogen carbonates (only in case of acids), metallic acids; non-metallic acids and bases.
- Similarities in acids and bases; reaction of acids and bases with water.
- Strength of acids and base solutions ; P^H and its importance

- Idea of salts, their family and P^H. Chemicals from common salts like Sodium Hydroxide, Baking soda and Washing soda; Hydrated salts, plaster of Paris.

Section II- (Life Science)

Paper 'B'

Marks 28

Time Allotted: 1 ½ Hours

Unit I: Life Processes

Periods 13/Marks

- What are life processes?
- Nutrition—Autotrophic Nutrition, Heterotrophic Nutrition. How do animals obtain their nutrition? Nutrition in Human Beings.
- Respiration.
- Transportation: Transportation in Plants.
- Excretion: Excretion in Human Beings, Excretion in Plants.

Unit II: Control and Co-ordination

Periods 10 /Marks 5

- Animals—Nervous System, What happens in Reflex Action? Human Brain, How are these tissues protected? How does the Nervous Tissue cause action?
- Coordination in Plants, Immediate response to stimulus, Movements due to growth.
- Hormones in Animals.

Unit III: How do Organisms Reproduce?

Periods 12/Marks 5

- Do organisms create exact copies of themselves? The importance of variation.
- Modes of reproduction used by unicellular organisms. Fission, Fragmentation, Regeneration, Vegetative Propagation, Budding, Spore Formation.
- Sexual Reproduction: Why the sexual mode of reproduction? Sexual reproduction in flowering plants. Reproduction in Human Beings. Male Reproductive System, Female Reproductive System. What Happens when the egg is not fertilized? Reproductive Health.

Unit IV: Heredity and Genetics

Periods 9/Marks 4

- Accumulation of variation during reproduction.
- Heredity: Inherited traits, Rules for the inheritance of traits, Mendel's contributions. How do these traits get expressed? Sex determination.
- Acquired and Inherited traits.
- Speciation.
- Classification, Tracing Evolutionary Relationships, Fossils, Evolution by stages, Evolution should not be equated with progress.

Unit V: Our Environment

Periods 8/Marks 4

- What happens when we add our waste to the Environment?
- Ecosystem—What are its components? Food chains and Webs.
- How do our activities effect the environment? Ozone layer and how it is getting depleted. Managing the garbage we produce.

Unit VI: Management of Natural Resources

Periods 8/Marks 4

- Why do we need to Manage our Resources?
- Forests and Wild life, Stake holders, Sustainable Management, Dams, Water harvesting.
- Coal and Petroleum.
- An overview of Natural Resource Management.



SCIENCE

Theory

Paper A (Physics & Chemistry)

Section-I (PHYSICS)

Marks 28

Marks 56 (Phy.+Chem. 28+28)

Time Allotted: 2½ Hours

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Section II- (Chemistry)

Marks 28

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- Similarities in acids and bases; reaction of acids and bases with water.
- Strength of acids and base solutions ;P^H and its importance
- Idea of salts, their family and P^H. Chemicals from common salts like Sodium Hydroxide, Baking soda and Washing soda; Hydrated salts, plaster of Paris.

Section II- (Life Science)

Paper 'B'

Marks 28

Time Allotted: 1 ½ Hours

Unit I: Life Processes

Periods 13/Marks

- What are life processes?
- Nutrition—Autotrophic Nutrition, Heterotrophic Nutrition. How do animals obtain their nutrition? Nutrition in Human Beings.
- Respiration.
- Transportation: Transportation in Plants.
- Excretion: Excretion in Human Beings, Excretion in Plants.

Unit II: Control and Co-ordination

Periods 10 /Marks 5

- Animals—Nervous System, What happens in Reflex Action? Human Brain, How are these tissues protected? How does the Nervous Tissue cause action?
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- Sexual Reproduction: Why the sexual mode of reproduction? Sexual reproduction in flowering plants. Reproduction in Human Beings. Male Reproductive System, Female Reproductive System. What Happens when the egg is not fertilized? Reproductive Health.

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- Heredity: Inherited traits, Rules for the inheritance of traits, Mendel's contributions. How do these traits get expressed? Sex determination.
- Acquired and Inherited traits.

- Speciation.
- Classification, Tracing Evolutionary Relationships, Fossils, Evolution by stages, Evolution should not be equated with progress.

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Periods 8/Marks 4

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Periods 8/Marks 4

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- Coal and Petroleum.
- An overview of Natural Resource Management.

PRACTICAL WORK

List of Practicals

Section-I

(PHYSICS)

Section 1

1. Verify the laws of reflection using mirror strips
2. Verify the laws of refraction using glass slab, and find the refractive index of the material.
3. Show that the image is as far behind the plane mirror as the object is in front of it.
4. Trace the path of rays through a glass prism and measure the angle of deviation. (2 obs.)
5. Using a glass prism, Prove that $i + e = A + d$.
6. Find the focal length of convex mirror using the candle, wire gauge and screen.
7. Trace the path of a ray of light through a glass slab and show that the angle of incidence is equal to the angle of emergence.
8. Verify Ohms law (2 obs.)
9. Prepare an electromagnet and observe the relation between the direction of current and polarity of the electromagnet.
10. Draw the magnetic lines for a bar magnet using a compass needle.

Project work

1. To construct an Astronomical Telescope using two convex lenses.
2. Prepare a model showing the production of thermo electric energy.
3. To generate wind energy using a wind mill.
4. Prepare and electromagnet.

5. To prepare a model to demonstrate Oersred experiment.

Section-II **(CHEMISTRY)**

1. Determine the pH of water obtained from different sources (at least four).
2. Determine the pH of Juice obtained form different fruits.
3. Simple volumetric Acid Base titrations.
4. Preparation of soap.
5. Preparation of hydrogen gas by the action of dil. Sulphuric acid on Zinc, and study the properties.
6. To test the conductivity of various salt solutions.

Project work.

1. Make a list that contains
Five elements in the Free State and
Five elements in the combined state.
2. To frame modern periodic table.
3. To make models of alkanes.

Section-III **(Life Science)**

Life Science (Section III)

1. Identifications of organs through charts /Models of the following
 - a. Digestive system in Humans
 - b. Circulatory system in humans
 - c. Nervous system in human beings
 - d. Respiratory system in human beings
2. To study the reproductive organs of a flower.
3. To measure the body temperature and observe pulse rate.
4. To measure the blood pressure using sphagnometer.
5. To show that green plants synthesize carbohydrates.
6. To prepare and study the temporary mount of *Lactobacillus*.
7. To study the microorganisms in stagnant water under microscope.
8. To study Mendelian ratios using pea seeds.

Project work:

- a. Preparation of vermicompositing (earthworms).
- b. Making a herbarium (At least 10 aquatic and 10 terrestrial plants).
- c. Effects of water pollution

Or

Air pollution
Or
Noise pollution

COMPUTER SCIENCE

CLASS–X

Maximum	:	100 Marks
Theory	:	40 Marks
Practical	:	60 Marks
Time	:	1 Hour
Unit I	:	IT Basics
Unit II	:	IT Tools
		MS Access
Unit III	:	IT Tools
		HTML
Unit IV	:	IT Applications

UNIT-I : IT BASICS

Internet: World Wide Web, Web servers, Web Browsers, HTML, Web address, Email address, URL, HTTP.

Services available on Internet: Information retrieval, Electronic Mails, Locating sites using search engines and finding people on the net, Chat, Video Conferencing, FTP, downloading and Uploading files from or to remote site, Newsgroup.

UNIT–II : IT TOOLS

MS- Office

MS Access

Basic concepts and need for a database, Creating a database, Setting the Primary Key Inserting data into a database, Inserting and deleting fields, Inserting and deleting Records, Data Validation: Field Size, Default Value, Validation Rule, Validation Text, Required, Allow zero length.

UNIT-III : HYPER TEXT MARKUP LANGUAGE

Basic Concept of Web Browsers with emphasis on popular browsers Internet Explorer and Netscape navigator.

HTML fundamentals:

Introduction to Web Page Designing using HTML, Creating and saving an HTML document, Elements in HTML Container and Empty elements, Designing Web pages using the following elements:

HTML, HEAD, TITLE, BODY (Attributes: BACKGROUND, BGCOLOR, TEXT, LINK, ALINK, VLINK, LEFTMARGIN, TOPMARGEN), FONT (Attributes: COLOR, SIZE, FACE), BASEFONT (Attributes: COLOR, SIZE, FACE), CENTER, BR (Break), HR. (Horizontal Rule, Attributes: SIZE, WIDTH, ALIGN, NOSHADE, COLOR), COMMENTS, ; for comments, H1..H6 (Heading), P (Paragraph), B (Bold), I (Italics), U (Underline), UL & OL (unordered List & Ordered List Attributes: TYPE, START, LI (List Item), Insertion of images using the element IMG (Attributes: SRC, WIDTH, HEIGHT, ALT, ALIGN)

Internal and External Linking between Web pages: Significance of linking, A-Element (Attributes: NAME, HREF, TITLE, ALT)

UNIT IV : IT APPLICATIONS

Students are suggested to work on the following areas using Access and HTML on topics implementing the tools covered in the course.

Domains:

Database

Personal Data Management System
Employee Payroll
Stock Inventory

Website Designing

Travel and Tourism
Rule India
Environment and Pollution.

Note:

1. Teachers are requested to demonstrate some other popular software for word processing, Presentation, Spreadsheet, Database management, System which support Hindi and /or some other Indian Language(s). (Leap Office is an example of Office suit with Indian Language support)
2. Students are suggested to prepare some document/presentations of their IT Application report file. In Indian Language(s).

Suggested Reading :

Information Technology on line by Dr. M. Afsar Alam, Devraa Books, Delhi-06.

PRACTICALS

Internal One practical Paper : 30 Marks

Duration of examination : 2 hours

Distribution of Marks

- (a) Hands- on Experience (2 Exercises)
 - (i) Using Internet 05 Marks
 - (ii) MS- Access 10 Marks
- (b) IT Application Report File 10 Marks
- (c) Viva 05 Marks

Design of Practical Question Paper

There is no pre-set question paper provided by the Board for conducting practical examination. This flexibility has been provided to give more freedom to the examiners for the improvement of practical examination, keeping in view the resources and other facilities available in the laboratory of the School. However, detailed instruction on the basis of syllabus, distribution of marks and conduction of practical examination has been provided. Examiners can set the question paper according to the prescribed curriculum and distribution of marks.

- (A) Hands - on Experience 15 Marks
 - (i) Using Internet 05 Marks
 - A problem using Internet
 - Send e-mail.
 - (ii) MS-Access 10 Marks
 - A problem in MS Access related to some of the tools given below to be tested during Examination.
 - Creating an entering data into a database
 - Setting the primary key.
 - Data Validation.

Note:- Printouts of the documents should be attached with the answer sheets

- (B) IT Application Report file 10 Marks
 - Students are supposed to mark a IT Application Report File containing real life assignment using MS –Access.
 - Documents of MS Access (At least 5).
- (C) Viva 05 Marks

External One Practical Paper

Duration of Examination : 2 Hours
Marks : 30

Distribution of marks

- | | |
|---------------------------------------|----------|
| (a) Hands on Experience (2 Exercises) | |
| (i) Using Internet | 04 Marks |
| (ii) HTML | 11 Marks |
| (b) IT Application Report File | 10 Marks |
| (c) Viva | 05 Marks |

Design of Practical Question Paper

There is no pre-set question paper provided by the Board for conducting practical examination. This flexibility has been provided to give more freedom to the examiners for the improvement of practical examination, keeping in view the resources and other facilities available in the laboratory of the school. However, detailed instruction on the basis of syllabus, distribution of marks and conduction of practical examination has been provided. Examiners can set the question paper according to the prescribed curriculum and distribution of marks.

- | | |
|--------------------------|----------|
| (A) Hands- on Experience | 15 Marks |
| (i) Using Internet | 04 Marks |

 A problem using internet.

 Searching pm a given topic and collecting relevant information.

- | | |
|-----------|----------|
| (ii) HTML | 11 Marks |
|-----------|----------|

 A problem on Web page designing (Minimum 2 pages) to be given which will cover some of the following HTML elements:

- HTML, HEAD, TITLE, BODY
- FONT
- CENTER, BR, HR, B,I,U,P
- Comments

The students are supposed to know the tools and style for designing the real life applications :

- Designing Web Pages for their School
- Designing Web Pages for their personal interest.

Break up of Marks (HTML)

Visual effect : 4

Linking : 2

Tools used : 5

Note: Printouts of the documents should be attached with the answer sheets.

- | | |
|--------------------------------|----------|
| (B) IT Application Report File | 10 Marks |
|--------------------------------|----------|

Students are supposed to mark a IT application Report File containing real life presentations. Report File must have printouts of the following :

HTML source code along with browsers view (at least 10)

Web Pages (Minimum 5) designed for the school (Both HTML code and the browser view).

- | | |
|----------|----------|
| (c) Viva | 05 Marks |
|----------|----------|

Suggested reading :

Oxford Computer Science by S. Panchal and A. Sabharwal for Class 10th.

WORK EXPERIENCE

(Class X)

The nature of essential activities at the secondary stage (Classes IX – X) will remain the same as propose for Class VI to VIII. However, their complexity will increase by adding more dimensions with a definite prevocational focus and on the- job work

1. Use of bus and railway time tables.
2. Milking of dairy animals.
3. Reception work in school.
4. Preparation & distribution of midday meal/snacks in composite schools.
5. Preparation of teaching aids and equipment for self and lower classes.
6. Helping school authorities in organizing exhibitions, picnics, tour and excursions, etc.
7. First aid activities like counting of pulse, taking of temperature and bandaging of wounds after their cleaning.
8. Helping traffic police in regulation of traffic.
9. Plantation of shady/fuel, ornamental/ A venue trees.
10. Preparation of family budget and maintenance of daily household accounts.
11. Acquaintance with common fertilizers and practices and their application with appropriate equipment.
12. Acquaintance with common pests and plant diseases and use of simple chemical and plant protection equipment.
13. Handling farm animals for feeding, washing or general examination.
14. Preparation of soak-pit for collecting liquid from the cattle shed.
15. Studying the nutrition and health status of people in a village/city, slum/tribal area.
16. Helping in community programmes and enhancing the nutrition. Health and environmental status of the community through door-to door contact programmes.
17. Digging branch latrines during festivals and maintaining them hygienically.
18. Participation in adult literacy programmes.
19. Helping in child-care.
20. Volunteer work in hospital and fairs, floods and famines and in accident, etc.

Note: - Work practice at this stage may also take the form of project with sequential activities relating to vocations in production or services sector. Each student should be required to take two projects in and outside the school, depending upon the availability of resources and time. Students should be required in and out side the school depending upon the availability of resource and time select project in such a way that at least two need areas are covered. The projects should provide vocational orientation.

A list of projects is given below:

1. Raising of flowers, vegetable, plants and their seedlings in nurseries.
2. Repair and maintenance of equipment for plant protection.
3. Prefabrication of irrigation channels.
4. Developing plants by vegetative propagation-budging, grafting, cutting, layering, etc.
5. Raising poultry birds (1) for eggs, (2) for table purposes.
6. Making bakery and confectionery products.
7. Food preservation- making of jam, jelly, tomato ketchup-pickles.
8. Project relating to non-conventional sources of energy-sun, wind, tides, bio-gas, etc.
9. Cookery skills.
10. Bee-keeping, bottling and marketing of honey.
11. Silkworm rearing for sale or yarn making.
12. Mushroom cultivation for consumption, preservation or sale.
13. Fish rearing in small ponds.
14. Post-harvest technology and safe storage of food grains.
15. Use of bacterial fertilizers.
16. Preparation of milk products.
17. Plant protection against pests and diseases.
18. Soil testing reclamation measures.
19. Preparation of stationery items such as files, files-boards, registers, writing pads, stamping ink, etc., etc.
20. Toeing and dyeing and screen-printing as commercial ventures.
21. Garment marking.
22. Repair and maintenance of domestic electrical gadgets.
23. Preparing electric extension boards for use in home/school or for sale.
24. Motor-winging as trade.
25. Photography-commercial.
26. Preparation of decoration pieces of a more sophisticated nature out of plaster of Paris.
27. Mat and carpet weaving.
28. Doll-making.
29. Hand embroidery.
30. Typewriting with adequate proficiency.
31. Stenography.
32. Preparation of nutritious snacks.
33. Preparation of a variety of teaching aids for use in school.
34. Plumbing.
35. Running a cooperative store.
36. Running a student's back.
37. Running a book bank.

HEALTH AND PHYSICAL EDUCATION

Class X

SPECIFIC OBJECTIVES:-

Health Education

1. To develop favourable attitude towards good health habits.
2. To prepare the individual for contribution towards the solution of common health problems.
3. To prepare the individual to contribute to environmental hygiene.
4. To develop active in good posture, exercise, rest, sleep, & food.
5. To develop favourable for participating in immunization programmes.
6. To develop favourable attitude to observe safety rules in and out of home.
7. To develop favourable attitudes towards health living through observance of health habits and such practices that contributes to good health.
8. To acquaint the individual with harmful effects of smoking, drinking and abuse of drugs.
9. To develop favourable attitude to cooperate with health, police and other organisations in the interest of efficient service to the community.
10. To enable the individual made right decision relating to principles and practices of consumer health.
11. To enable the individual to practise a acceptable health habits and shun from practices and habits, like smoking, drinking etc.

Physical Education

1. To promote physical fitness and organic efficiency.
2. To develop awareness regarding importance of physical fitness and organic efficiency in individual and social life.
3. To develop awareness regarding transfer of fundamental process to physical activities of one's choice.
4. To develop interest in exercise, sports and games for self-satisfaction in present and later life.
5. To enable an individual to give evidence of talent and such traits as self-mastery, discipline, courage confidence and efficiency.
6. To enable an individual to display sense of responsibility, patriotism, self-sacrifice and service to the community in a better way.
7. To develop awareness to good posture so that one may strive to maintain good posture.
8. To enable an individual to lead an enthusiastic and active life.
9. To enable an individual to practise socially acceptable behaviour pattern in an impressive manner.

HEALTH EDUCATION

1. Personal Health

Sign and symptoms of diseases desirable practices to prevent diseases AIDS and venereal diseases.

2. Environment Health

- (i) Water precaution against contamination.
- (ii) Use of water for drinking and cooking
- (iii) Air-factor of air pollution.

3. Food and Nutrition

Balance diet from locally available food; food habits; healthy cooking practices; food preservation and conservation.

4. Control of diseases

Participating in popularization of immunised programme precautions against communicable diseases and epidemics participating in naturalization of natural calamities like floods, draughts, cyclones, etc.

5. Consumer Education

Making wise decisions in respect of various consumer products on the basis of their claims in the form of advertisement; developing skills of distinguishing between a quack and a medical practitioner.

6. First- Aid Home Nursing

Various steps of safety, first-aid home nursing

- (a) Organisation of first-aid teams.
- (b) Preparing and using first-aid kit.
- (c) Participation in safety measure against fire, air-aids and other measures.

Knowledge of causes and condition of athletic injuries and developing code of conduct for safety and safety measures.

7. Physical Education

1. Athletics

- (a) Repetition of skills & techniques of the events learnt in the previous class.
- (b) Hurdles-110m. Low (3 height) Warming up exercises, running over the sticks, setting leading action.
- (c) Conditioning
Specializing: Sprints; endurance run; jumps, throw.

MAJOR GAMES (ANY TWO)

1. Badminton

- (a) Repetition of skill learnt in the previous class.
- (b) Drills to develop techniques of ; spin service, flat service; floating; pushing; drop.
- (c) Game practice.

2. Basket- Ball

- (a) Repetition of skills learnt in the previous class.
- (b) Practising drills and techniques.
- (c) Offensive and defensive techniques.
- (d) Positional play.
- (e) Training for endurance and speed

3. Cricket

- (a) Repetition of skills learnt in the previous class.
- (b) Specific drills to develop technique-Batting, Bowling, Fielding.
- (c) Offensive and defensive tactics.
- (d) Training-Endurance.
- (e) Practice matches.

4. Foot-Ball

- (a) Repetition of skills learnt in the previous class.
- (b) Specific drills to develop techniques. Kicking, Trapping, Shooting into goal Dribbling, Goal keeping.
- (c) Position play Pushing, Kicking, Dribbling, Scooping, Goalkeeping, Goal shooting.
- (d) Positional play
- (e) Offensive and defensive tactics- Training-Endurance, Speed & Moves.
- (f) Training for endurance and speed.
- (g) Regulation game

5. Hand Ball

- (a) Repetition of skills learnt in the previous class.
- (b) Specific drills to develop techniques. Passing, Shooting, Goalkeeping, Blocking
- (c) Offensive and defensive tactics.
- (d) Positional play.
- (e) Training to develop different moves, speed and endurance.
- (f) Regulation games.

6. Hockey

- (a) Repetition of skills learnt in the previous class.
- (b) Specific drills to develop Techniques, Passing, Hitting.

7. Kabaddi

- (a) Repetition of skills learnt in the previous class.
- (b) Specific drills to develop techniques.
- (c) Offensive and defensive tactics.
- (d) Regulation game.

8. Kho-Kho

- (a) Repetition of skills learnt in the previous class.
- (b) Skills-single and double chain dodging
- (c) Practice of skills.
- (d) Regulation game.

9. Volley-Ball

- (a) Repetition of skills learnt in the previous class.
- (b) Skills-Passing.
 - (i) Upper hand pass and turn.
 - (ii) Upper hand pass with back and side roll.
 - (iii) Blocking.
- (c) Positional play.
- (d) Offensive and defensive tactics.
- (e) Regulation game.

BOYS

III. Gymnastics:

Repetition of skills learnt in the previous class:

A. Skills part

Floor Exercises :

1. Combination of previously learnt exercises.
2. Flip-flop through teaching stages with the help of a teacher.
3. Forward salto with take-off from the spring board.

Note: Skill No. 2 & 3 should only be taught keeping in view the capability of an individual.

Parallel Bars

- (i) upper arm swing.
 - (ii) Back upraise.
 - (iii) Up start.
- Swing in support position.

Vaulting Horse

- (i) Mastery over the teaching stage of straddle vault on long horse.
- (ii) Complete straddle vault on long horse.

Horizontal Bar

- (i) One leg up-start.
- (ii) One leg circle backward.

B. Conditioning Exercises

This aspect should include

Various exercises to develop strength, endurance, speed, agility, flexibility and coordination.

GIRLS

Gymnastics

Repetition of skills learned in the previous class.

A. Skill part

Floor Exercises

1. Mastery over the previously learnt skills with emphasis on dancing movement incorporating with music.
2. Flic-flac-through various teaching stage keeping in view the capability of an individual.

Balancing Beams

1. Combination of various movements.
2. Various kinds of jumps on balancing beam.
3. Straddle legs sitting on balancing beam.

Vaulting Horse

1. Mastery over the various stages of handspring.
2. Complete handspring, keeping in view the capability of an individual.

B. Conditioning exercises:

This aspect should include various exercises to develop strength, endurance, speed, flexibility, agility, rhythm and coordination.

IV. Yogic Exercises

1. Shalabhasan
2. Garabhasan
3. Naukasan
4. Shirshasan
5. Hjooolasan
6. Brishabhasan
7. Oordh Sarvangasan
8. Hast-Padangushasan
9. Uttan-Kooramasan
10. Surya-Namaskarm.

V. Combative

A. Wrestling

1. Repeating the previous skills learnt in the previous classes.
2. Pinning holds
 - (a) Single arm roll
 - (b) Single arm roll with one leg.
 - (c) Double arm roll from underneath.
 - (d) Cradle.
 - (e) Crougt lift.
 - (f) Break down and counter for above holds.

3. Regulation bouts

B. Dagger Fight (Jambia)

- (a) Repetition on the strokes and defense skills learnt in the previous class.
- (b) Stroke to a part of the body and defense. Fight after dagger release.
- (c) Repetition on the strokes and defense skills learnt in the previous class.
- (d) Stroke to a part of the body and defense.
- (e) Fight after dagger release.
- (f) Demonstration fight.

VI. JUDO

1. History and its Developments.
2. Rules of the judo.
3. Conditioning.
4. Purpose & methods of Rahdori/Yakshoku-Rensho.

Skills

1. Thanai Goshi (Spring Hip Throw)
2. Tato Otoshi (Body Drop)
3. Koshi Gurma (Hip Wheel)
4. Satomaki Komi (Outside Drop)
5. Akuti Eri Jime (Sliding Lapel Check)
6. Ude Garami and Gatani
7. Hand Spring
8. Counter Techniques and Contests.

Terminology

Ippon	Pull Poine
Wazzari	Almost Ippon
Yuko	Almost Wazzari
Koka	Almost Yuku
Shido	Note
Chui	Chuation
Keikoku	Warming up
Hikwake	Draw
Osackomi	Holding
Toketa	Hold Broken
Newaza	Ground Technique
Matte Maitta	Wait
Sonomama	Don't move
Yoshi	Start Again

VI. Swimming (Optional)

1. Repeat the skills learnt earlier
2. Develop the skills of all the four stroke.
3. Simple ways of entry in the water (life saving)
4. Release from the victim.
5. Simple methods of carry-Head Cross chest.
6. Methods of resuscitation.

ART EDUCATION

(Class X)

There shall be one paper of 100 marks and 3 hours duration.

1. Two Dimensional or Pictorial Activities.

- (i) Study of visual resources and their expression
- (ii) Study of line, strokes, marks, tones, textures, etc., While organising two dimensional spaces with 2 dimensional and 3 dimensional shapes and forms.
- (iii) Creative use of perspective in spatial relationship.
- (iv) Creative use of colour to show space, atmosphere, etc.
- (v) Use of contrast as an expressive element of art.

2. Study and use of various media and techniques to the extend of their availability.

- (i) Crayon, charcoal pencil colours and gouacha, acryline colour and other unconventional source of colours and tools on various surface such as papers, canvases, hard-board, simple marking cloth pasted on paper etc.
- (ii) Collage and mosaic work with coloured papers and

3. Group Activities

- (i) Organising display and exhibitions of student's periodical and sessional work.
- (ii) Organising inter-school art exhibitions (not with a view to competition and prize distribution but with a view to widen interaction.
- (iii) Planning and arranging cultural evenings, musical concerts, film shows and other performances (including other regional and folk community art forms)
- (iv) Participating in study trips to museums, botanical gardens, zoological gardens, and art galleries and art institutions etc. fro greater awareness of the environment & cultural varieties.

4. Theoretical understanding of Art and Culture

- (i) Short notes with suitable reproductions on important aspects of Indian Art and Culture.
- (ii) Important contemporary Artists and Art movements.

Suggested Reading : Art Education, Devraa Books, New Delhi-6.

PAINTING

There shall be one paper of 100 marks and 3 hours duration.

Painting of Memory

Simple composition in (water/Poster/Pastel) Colours on given subject based on sketching from life.

Or

ART AND DRAWING

There shall be one paper of 100 marks and 3 hours duration based on the following contents:

I. Design and colour design

Principles of ornament naturalistic, conventional, abstract arrangement of the forms and details, compressing, repetition, alternation, symmetry, radiation, balance proportion, variety, rhythm, contrast, fitness, and utility ornamental filling of given spaces mander, unit repeat, drop, repeat all over pattern, border designs, angle and elbows. Centre chands and corners, tracing and transferring of design suitable embroidery, carpentry, namda making, gabba, applique, and hook work, car co printing, wall decoration, and stenciling.

II. Colour

Difference in spectrum colours and pigment colours, practice in pigment colours, primary, secondary and tertiary colours, preparation of tints and shades, colour harmony and contrast, juxtaposition of colours mixing and matching of colours.

Medium to be used: Tempera powder colours, pastel colour and water colour.

Or

Geometrical Design, Solid Geometry and Scale drawing

I. Geometrical Design

Banded design based on Geometrical form all over geometrical patterns, designs suitable for sealing covers such as Khutamband, Bandircom, Chargola, Latic, design (woolen pingraz) based on geometrical form such as stars, lyzones etc.

Medium to be used: Water colour, Pastel colour.

II. Solid Geometrical Drawing

Drawing from cube, prism, cone, pyramid, cylinder in different angles showing deviation and plan according to scale.

III. Scale Drawing

Preparation of simple scale and diagonal scales, drawing from simple carpentry articles showing plan, side elevation and from elevations such as paper trays, teapots, sitting garden bench, stool, chair etc.

MUSIC

There shall be one theory paper of 25 marks and 2 hours duration and a practical paper of 75 marks and 3 hours duration.

THEORY PAPER

Marks : 25

Time : 2 hours

1. Definition of the following terms:
Sangeet Shruti, Swras and its Kinds, Septak (Mander, Madha and Tar Sthai Antra Rag Thath, Laya, its kinds, Pakar, Vadiswra Aavadi and Varj)
2. To write Teen Taal, Dadra and Katherawa in Singal lays.
3. The Main parts of Musical instruments in practice.
4. Short life histories of Pandit V.N. Bakhandy, Pandit V.B. Paluskar and Amir Khusroo.
5. Writing of Ragas or Gats in Notation.

PRACTICAL EXAMINATION

Marks : 75

Time : 2 hours

1. Handing of Tanpuri or any Musical Instrument: Sitar, Rabab, Israj, Flute, Santoor.
2. To sing or play paltas (Alankars)
3. To sing or play the following Ragas with atleast two Tans or Todas: Bhoopali Khamaj or Bilwal.
4. To sing a folk song and a devotional song.
5. To give the Tal beats of Teental Dardra and Kharva in Singal laya.

Note: *The students have to pass theory and practical Examination separately.*

Books recommended :

Sangeet Shastra Darpan (Part-I) by Smt. Shanti Govardhan (Pathak Publication 27 Mahazani Tala, Allahabad.

HOME SCIENCE

There shall be one theory paper of 75 marks and 3 hours duration and practical examination of 25 marks and 3 hour duration.

Part-I

Marks : 40

- Unit-I** : Home a clean, comfortable and attractive place to live and work. **8 marks**
- Unit-II** : Care of Home and its equipment cleaning of floor, walls furniture equipment including utensils and other accessories. **8 marks**
- Unit III** : Budgeting of family income to meet family needs and plants. **8 marks**
- Unit IV** : Purchase of household item: quality, cost, utility. **8 marks**
- (a) Safety in home.
- (b) Safe storage of cleaning agents and drugs.
- (c) First aid treatment of burns and cuts, etc. **8 marks**

Part- II

Marks: 35

(Textile and Clothing)

- Unit- I** : Selection, care operations of sewing machine **10 marks**
- Unit- II** : Fabrics: types of fabrics, their characteristics. **10 marks**
- Unit-III** : Selection of clothing-Factors affecting selection such as durability, beauty comfort, season, texture, etc. **10 marks**
- Unit-IV** : Basic embroidery stitches. **5 marks**

PRACTICALS

- (1) Floor decoration using alpha paints, flowers and leaves, etc.
- (2) Cleaning of metal (s) & household for one week and discuss the pattern.
- (3) Record your family expenditure for one week discuss the pattern.
- (4) Market survey of cost and quality of household items.
- (5) First aid burns and cuts, etc.
- (6) Cleaning and care of sewing machines.
- (7) Collection of fabric sample and discussions of their characteristics.
- (8) Embroidery on cushion covers/s of a backs.

The Jammu and Kashmir State Board of School Education



**SYLLABI AND COURSES OF STUDY
FOR
CLASS X**

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SCHEME OF STUDIES

Every candidate shall be required to take up all the compulsory five subjects to pass/qualify the Class Xth as course listed below. They can also offer one subject under additional languages/subject.

Compulsory Subjects:

1. Urdu or Hindi (First Compulsory Language)
2. General English (Second Compulsory Language)
3. Mathematics.
4. Social Science (History, Civics, Geography)
5. Science (Physics, Chemistry, Life-Science)

Additional Language/Subject/s:

Urdu
Kashmir
Arabic
Persian
Hindi
Dogri
Sanskrit
Bodiyig
Punjabi
Computer Education/Science.

Note: No repetition of language is allowed, while opting for additional subject.

Activity Related Areas:

- (i) Work Experience
- (i) Health and Physical Education
- (i) Art Education

Subjects for Physically Handicapped Children Blind Deaf and Dumb.

- (i) Painting
- (ii) Music
- (iii) Home Science.

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