

ENGLISH

DISTRIBUTION OF MARKS

1.	Prose	-	25
2.	Poetry	-	15
3.	Rapid Reader	-	10
4.	Grammar & Composition	-	30
<hr/>			
Total			- 80 marks

I. PROSE

Pieces to be read:

- a. The Bond of Love
 - b. Reach for the Top
 - c. The Silver Lining
 - d. The Open Window
 - e. Megan
 - f. Through the Iron Curtain
 - g. Civil Rights for all
 - h. Man and the Environment
- } Only for Classroom transaction and internal assessment not for evaluation

II. POETRY

Pieces to be read:

- a. Where the Mind is Without Fear
- b. Rain on the Roof
- c. The Lake Isle of Innisfree
- d. The West Wind
- e. No Men are Foreign

III. RAPID READER

- **The Count of Monte Christo - by A. Dumas**
- Or*
- **The Strange Case of Dr. Jekyll and Mr. Hyde - by R. L. Stevenson**

IV. GRAMMAR & COMPOSITION

Contents:

- 1. Reading/Writing**
 - Comprehension (Prose Passages)
 - Advertisements
 - Public Notices

Letter Writing – both formal & informal
Precis

2. Grammar

Direct & Indirect Speech
Participles
Gerunds
Active Voice and Passive Voice
Preposition
Idioms & Phrases

V. ESSAY - Unseen

PRESCRIBED TEXTBOOKS:

1. Prose & Poetry

- **Meghalaya English Reader 10**
Oxford University Press, Pragjyotish Apartment (1st Floor),
M. Tayabullah Road, Dighali Pukhuri (East), Guwahati – 781001.

2. Rapid Reader

- **The Count of Monte Christo – by Alexander Dumas**
M/S Macmillan India Ltd., S. C. Goswami Road, Pan Bazar, Guwahati –
781001.

Or

The Strange Case of Dr. Jekyll and Mr. Hyde – by R. L. Stevenson
M/S Macmillan India Ltd., S. C. Goswami Road, Pan Bazar, Guwahati –
781001.

3. Grammar & Composition

- **Senior School Grammar & Composition**
(Textbook and Booklet)
Published by Orient Blackswan Pvt. Ltd., Hyderabad – 500029,
Telangana, India.

Or

Scholar's Senior English Grammar & Composition
Scholar Publishing House Pvt. Ltd., 85, Model Basti, New Delhi – 110005

ADDITIONAL ENGLISH

DISTRIBUTION OF MARKS

1.	Prose	-	22 marks
2.	Poetry	-	16 marks
3.	Plays	-	15 marks
4.	Composition	-	19 marks
5.	Essay	-	8 marks
Total			80 marks

I. PROSE

Pieces to be read:

- a. A High Drive - L. P. Hartley
- b. War - Luigi Pirandello
- c. Out of Business - R. K. Narayan
- d. The Postmaster - R. Tagore
- e. The Lady or the Tiger? - Frank R. Stockton

II. POETRY

Pieces to be read:

- a. The Education of Nature - William Wordsworth
- b. Swimmers - Louis Untermeyer
- c. The Man with the Hoe - Edwin Markham
- d. If - Rudyard Kipling
- e. A River - A. K. Ramanujan

III. PLAYS

- *Othello - by William Shakespeare*

IV. COMPOSITION

Contents:

- a. One Word Substitution
- b. Amplification
- c. Substance Writing
- d. Paraphrasing from the Play
- e. Advertisement
- f. Picture Composition

PRESCRIBED TEXTBOOKS:

- 1. Prose
 - A Miscellany of Short Stories

Published by Inter University Press Pvt. Ltd., Educational Publishers,
30/7, Shakti Nagar, New Delhi - 110007.

2. Poetry

- **Wings of Poesy**

M/S Evergreen Publications, 4779/23 Ansari Road, Darya Ganj,
New Delhi - 110002.

3. Plays

- **Three Shakespeare Tragedies - (Macmillan)**

4. Composition

- **Senior School Grammar & Composition
(Textbook and Booklet)**

Published by Orient Blackswan Pvt. Ltd., Hyderabad - 500029,
Telangana, India.

OR

Scholar's Senior English Grammar & Composition

Scholar Publishing House (P) Ltd., 85, Model Basti, New Delhi - 110005.

ASSAMESE (MIL)

DISTRIBUTION OF MARKS

(including 20 internal marks)

Prose	-	20 marks
Poetry	-	15 marks
Rapid Reader	-	15 marks
Grammar	-	20 marks
Composition	-	20 marks
Essay	-	10 marks
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Total	-	100 marks

I. PROSE

Pieces to be read:

- Prachin Bharatiya Shiksha - Hemchandra Goswami.
- Sankardevar Samaj Sangathan - Dimbeswar Neog.
- Assamar Janagushtir Gatahani - Abdus Sahattar.
Arun Sanskriti.

II. POETRY

Pieces to be read:

- Borgeet - Madhabdev
- Guahe Ebar Mur Prio Bihangini - Raghunath Choudhury
- Mur Desh - Hiren Bhattacharjee

III. RAPID READER

- **Mur Saisab, Mur Kaisor by Bhobendra Nath Saikia**
Ten chapters (From Chapter 11 upto the end of the book)

IV. GRAMMAR

Pieces to be read:

Sandhi
Nattwa Aru Shattwa Bidhi
Samasa (Digu Samasa, Bahubrihi Samasa, Abyaieebhab Samasa)
Pratyaya (Tadhith Pratyaya, Stri Pratyaya)
Pad Prakaran
Karak

V. COMPOSITION

Pieces to be read:

- a. Make Sentences with Phrases and Idioms
- b. Opposite words
- c. One word for a group of words
- d. Similar words
- e. Amplification
- f. Letter writing

VI. ESSAY WRITING

Types of Essay:

Adarsha Mulak
Bhraman Mulak
Jibani Mulak
Barnana Mulak

PRESCRIBED TEXTBOOKS:

1. Prose and Poetry

- **Madhyamik Assamiya Sahitya Chayanika for Class IX and X**
Published by Assam Textbook Production & Publication Corporation,
Guwahati – 781001.

2. Rapid Reader

- **Mur Saisab, Mur Kaisor by Bhobendra Nath Saikia.**

3. Grammar

- **Adhunik Assamiya Bhasar Vyakaran by Giridhar Sarma.**

4. Composition

- | | | | |
|-------|---------------------------|---|---------------------------------------|
| (i) | Rachana Bishitra | - | <i>Dharma Sinha Deka.</i> |
| (ii) | Prabashika Rachana Shiksa | - | <i>Giridhar Sarma.</i> |
| (iii) | Assamiya Rachana Shiksa | - | <i>Dr Lila Gogie, Dr Nabin Sarma.</i> |

BENGALI (MIL)

DISTRIBUTION OF MARKS

Prose	-	18 marks
Poetry	-	12 marks
Rapid Reader	-	12 marks
Grammar	-	20 marks
<u>Composition</u>	-	<u>18 marks</u>
Total	=	80 marks

I. PROSE

Pieces to be read:

- Durdin - Bankim Chandra Chattopadhyaya
- Oporajit Opu- Bibhutibhusan Bandopadhyaya
- Songhat - Tarashankar Bandopadhaya

II. POETRY

Pieces to be read:

- Phullorar Baromasya - Mukundoram Chakrabarty
- Botobriksha - Michael Madhusudan Dutta
- Robindranather Proti - Buddhodeb Bosu

III. RAPID READER - *Mayamoy Meghalaya by Shanku Maharaj* Part II (Garo Hills) - Chapter - (5 to the end)

IV. GRAMMAR

Pieces to be read:

Definition and Example:
Borno Biporjoy - Swaragam
Abyoibhab Somas - Bohubrihi Somas
Pair of Words
Use of Phrases
Substitute in One Word

V. COMPOSITION

Pieces to be read:

Comprehension
Expansion of Idioms
Picture Composition *Or* Paragraph Writing

PRESCRIBED TEXTBOOKS:

1. **Prose & Poetry**
 - **Madhyamik Bangla Sahitya Chayanika**
Assam Rajyik Pathya Pronoyon Ebong Prakashan Nigam Ltd.

2. **Rapid Reader**
 - **Mayamoy Meghalaya by Shanku Maharaj**

3. **Composition**
 - **Bani Bichitra by Piyush Dey**
Or
Adhunik Bangla Byakaran by Jogodish Ghosh

GARO (MIL)

DISTRIBUTION OF MARKS

Prose	-	25 marks
Poetry	-	18 marks
Rapid Reader	-	10 marks
Grammar	-	10 marks
Composition	-	7 marks
Essay Writing	-	10 marks
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Total	-	80 marks

I. PROSE

Pieces to be read:

1. Rev. Thangkan K. Sangma – *Lindrid D. Shira*
2. Jatni Nisan, Git Aro Chin – *Brucellish K. Sangma*
3. Meghalayani Sam Bolrang Aro Do'o Matrang – *T. T. C. Marak*
4. Captain W. A. Sangma – *Mary Celina A. Sangma*
5. Chadambeni Salrang – *Lindrid D. Shira*

II. POETRY

Pieces to be read:

1. Ang' Chakki – *Evelyn R. Marak*
2. Saljong Tasin Me'chik – *Monensing R. Sangma*
3. A songtangna Sintea – *Surendra S. Marak*
4. Cha'asia – *Barendra S. Bangshall*
5. Da'al – *Gilbert K. Marak*

III. RAPID READER - Patchisa Bibal – S. G. Momin

IV. GRAMMAR

Pieces to be read:

Bak - I

Phrase

Clause

Bak - III

- a) Verb - Ma'arang, Predicateko Chu sokatgiparang, Mood, Participle, Verbal Noun, Verbal Adjective aro Tense.
- b) Adjective - Ma'arang aro Tosusaani
- c) Adverb - Ma'arang aro Tosusaani, Napsikgipa Adverbrang.

V. COMPOSITION

VI. ESSAY WRITING

PRESCRIBED TEXTBOOKS:

1. **Prose & Poetry**
 - **Poraiani Ki tap X**
Tura Book Room, Tura.

2. **Rapid Reader**
 - **Patchisa Bibal - Sodini G. Momin.**
M. M. Book Point, Chandmary, Tura, Meghalaya.

3. **Grammar**
 - **A chik Grammar by E. G. Phillips**
Tura Book Room, Tura, Meghalaya.

4. **Composition**
 - **A chik Composition by K. M. Momin**
Tura Book Room, Tura, Meghalaya.

HINDI (MIL)

DISTRIBUTION OF MARKS

Prose	-	20 marks
Poetry	-	20 marks
Rapid Reader	-	15 marks
Grammar	-	17 marks
Composition		
(a) Essay	-	8 marks

Total - 80 marks

I. PROSE

Pieces to be read:

- Aazadi Sabhi Chahte Hai, Lekin - *by Yogendra Kumar Rawal*
- Swami Vivekanand - *by Urmila Bhargav*
- Khel Jagat - *by Dr. Janak*
- Bimaar Ka Ilaj - *by Udai Shankar Bhatt*
- Vishaal Bharat Ke Nirmata - *by Vishu Prabhakar*
- Bharat Ki Janta Ka Pratham Sewak - *by Jawaharlal Nehru*

II. POETRY

Pieces to be read:

- Chahta Hu - *by Ramaotar Tyagi*
- Chalna Hamara Kam - *by Shiv Mangal Singh Suman*
- Seekh Bhare Dohe : Tulsi Das, Kabir Das
- Jai! Jai! Vijay - *by Devraj Dinesh*
- Priyatam - *by Suryakant Tripathi Nirala*

III. RAPID READER

IV. GRAMMAR & COMPOSITION

Pieces to be read:

- Vyakaran Khand
- Rachna Khand

PRESCRIBED TEXTBOOKS:

1. Prose & Poetry

- **Alok Bharti Bhag - 8**

M/S Pitambar Publishing Co. Ltd., 888 East Park Road, Karol Bagh,

New Delhi - 110005.

2. Rapid Reader

- **Sanchayan Part - II (NCERT)**

3. Grammar & Composition

- **Basha Vyakaran IX & X**

Neeta Prakashan Children's Book House, A-4 Ring Road,
South Extension - 1, New Delhi - 110049.

KHASI (MIL)

Total marks - 100

Theory-80

Internal - 20

Pass marks - 30

DISTRIBUTION OF MARKS

Poetry	-	14
Prose	-	24
Rapid Reader	-	14
Grammar & Composition	-	28

Total - 80 marks

I. PROSE

Textbook Prescribed:

(a) **Ki Dienjat Jong Ki Longshwa by J. Bacchiarello**

Chapters: Ka dorbar jong ki Khasi hyndai;
Ki Mawbyinna; Ki Mawniam bad Ki Kor

(b) **Ki Parom Barim U Khun Khasi Khara by Maurice G. Lyngdoh**

Chapters: U Briew bad u Ksew; U masi bad u briew;
U Kyllang bad u Symper

(c) **Ki Phawer U Aesop by Soso Tham**

Chapters: Chapter 21 to 30

II. POETRY

Textbook Prescribed:

(a) **Ka Duitara Ksiar by Soso Tham**

Chapters: U Dieng Bilat; Ki sngi ba la leit noh;
Ka Mynsiem Bashynrang; Ki Sw Aiom

III. RAPID READER

Textbook Prescribed:

(a) **Ki Dienjat Ha U Shyiap by Hughlet Warjri**

Chapters: U Syiem ka jinglaitluid; U Nongsaindur ka Nongbah Shillong;
U kpa ka sain pyrthei ha ri Khasi-Jaintia

IV. GRAMMAR & COMPOSITION

(i) **Ka Grammar by H. W. Sten**

Chapters: Ka Pronoun

(ii) **Ki Dienjat Jong ki Longshwa by J. Bacchiarello**

Chapters: Chapter 42 and 48 - Ka jingbatai ktien

(iii) Essay

(iv) Precis Writing

MIZO (MIL)

DISTRIBUTION OF MARKS

Hla (Poetry)	- 20 marks
Thu (Prose)	- 25 marks
Rapid Reader	- 15 marks
Grammar & Composition	- 10 marks
Idioms & Phrases and Essay	- 10 marks
Total	- 80 marks

I. HLA (POETRY)

Pieces to be read:

- | | | | |
|------|-------------------------|---|---------------|
| i) | Nungchate hmakhua | - | Ngurchhawna |
| ii) | Siamtu Pathian tan | - | P.S.Chawngthu |
| iii) | Thal awiin lelte pan | - | Romani |
| iv) | Zofate inpumkhatna | - | C.Chhuanvawra |
| v) | Mizo kan nih kan lawm e | - | Rokunga |

II. THU (PROSE)

Pieces to be read:

- | | | | |
|------|---------------------------------|---|-------------------------|
| i) | Nun kawng | - | R.L.Thanmawia |
| ii) | Zawlbuk | - | J.Liankhuma |
| iii) | Ram hring | - | Laltluangliana Khiangte |
| iv) | Mizo khawtlang inawp dan | - | B.Lalthangliana |
| v) | Tirhkohte Thiltih (Bung 1 - 28) | | |

III. RAPID READER

- | | | | |
|---|---------------------------------------|---|-------------------------|
| - | Kristian Vanram Kawng Zawh Thu (9-18) | - | Chuautera (Translation) |
|---|---------------------------------------|---|-------------------------|

IV. GRAMMAR & COMPOSITION

- i) Adjective
- ii) Verb
- iii) Adverb
- iv) Amplification

V. IDIOMS & PHRASES AND ESSAY

- i) Tawng Upa
- ii) Essay

PRESCRIBED TEXTBOOKS:

- | | | | |
|----|---|---|------------------|
| 1) | Mizo (Class X Zirlai) | } | MBSE Publication |
| 2) | Mizo Grammar & Composition | | |
| 3) | Kristian Vanram Kawng Zawh Thu - Chuatera Translation | | |
| 4) | Mizo Bible (1982 Edition) | | |

NEPALI (MIL)

DISTRIBUTION OF MARKS

1.	Prose	-	30 marks
2.	Poetry	-	18 marks
3.	Rapid Reader	-	10 marks
4.	Grammar & Composition including Essay	-	22 marks
Total			- 80 marks

I. PROSE

Pieces to be read:

- a. Naso
- b. Paribanda
- c. Aljheko Ich-chha
- d. Chithih
- e. Shiksha Ko Udheshya
- f. HarGovind Khurana
- g. Paras Mani Pradhan

II. POETRY

Pieces to be read:

- a. Garib
- b. Gauthaliko Chiribiri
- c. Bhanu Bhakta Prati
- d. Sweet Falls
- e. Adhikar Ra Kartavya
- f. Jeevan Ra Dristi
- g. Kavi Prati

III. RAPID READER

IV. GRAMMAR & COMPOSITION

Pieces to be read:

- a. Essay Writing (Nibandha Lekhan)
- b. Comprehension (Bodh Pranali)
Or
Letter Writing (Patra Lekhan)
- c. Amplification (Vistritikaran)
- d. Paragraph Writing (Anuchhed Lekhan)
- e. Linga, Sangya, Visheshan, Sandhi Vichched, Kriya Rayasko Prakar
- f. Dhatu Ra Pratyay, Upasarga, Vachya, Vakyansha, Tukka Ra Ukhan

- g. Vipritart\ Hak Shabda, Sammocharit Shabda, Prayayvachi Shabda, Shar Shabda

PRESCRIBED TEXTBOOKS:

1. **Prose & Poetry**
- **Madhyamik Nepali Sahitya Part V**
Textbook Committee (Nepali)
2. **Rapid Reader**
- **'Maita - Ghar' by Shri Laen Singh Bangdel**
Saajha Prakashan, Kathmandu, Nepal.
3. **Grammar & Composition**
 - (i) **Madhhyamik Nepali Vyakaran Ra Rachana**
Written & Compiled By the Expert Academicians
Shri Raaj Prakashan, Darjeeling
OR
 - (ii) **Vyakaran Saurabh (Chautho Bhaag) (Part - IV)**
Written by Vishnu Sharma Adhikari
Puspa Prakashan, Siliguri.

URDU (MIL)
CLASS - X

DISTRIBUTION OF MARKS
Including 20 internal marks

Prose	-	30 marks
Poetry	-	25 marks
Grammar	-	25 marks
Life History	-	10 marks
Essay	-	10 marks
Total		100 marks

I. PROSE

Pieces to be read:

Afsana

Writer

- | | | |
|----|--------------|---------------------|
| 1. | Naya Guanoon | Sadat Hassan Mantoo |
| 2. | Bheek | Hayat-u-Ilah Ansari |

Sawaneh (life history)

- | | | |
|----|---------------------|--------------------|
| 3. | Sirsyed Ka Bachapan | Altaf Hussain Hali |
|----|---------------------|--------------------|

Darama

- | | | |
|----|----------|-----------------|
| 4. | Aazmaish | Mohammad Mujeeb |
|----|----------|-----------------|

Aapbiti

- | | | |
|----|-------------------------|-------------------|
| 5. | Chori our Uska Kaffarah | Syed Abid Hussain |
|----|-------------------------|-------------------|

Mazmoon

- | | | |
|----|---------------------|------------------------|
| 6. | Auraton Ke Haquoque | Sir Syed Ahmad Khan |
| 7. | Makhaloot Zuban | Maulavi Abdul Haque |
| 8. | Mahaul Bachaia | Mohammad Aslam Perveez |
| 9. | Chakabast Lakhnavi | Aal Ahmed Sarvar |

II. POETRY

Pieces to be read:

Ghazal

Poets

- | | | |
|----|-----------------------------|-----------------------------|
| 1. | Bahar Besapre jam Guzre hai | Mirza Mohammad Rafi Sauda |
| 2. | Lai Heyat | Sekh Mohammad Ibrahim Zoque |
| 3. | Dhondage agar Mulkon Mulkon | Shad Aazimabadi |
| 4. | Aalam-e-Razagar | Asgar Goudave |

Nazam

Poets

- | | | |
|----|-----------------------|------------------|
| 5. | Jalwae Darbar-e-Dehli | Akbar Illahabadi |
| 6. | Haquiquat-e-Husn | Mohammad Iqubal |

7. Aandhi Kaifi Azami
8. O-Des-Se A'anewale Bata Akhtar Shiravi

Rubai

9. (i) Gulshan mein Phiron ke Saire Sehra Dekhon Anis
(ii) Rutba jise dunia mein khuda deta hai Anis
(iii) Fitrat ki dihoi musarrat kho kar Tilok Chand Mahroom
(iv) Mazhab ki zuban Tilok Chand Mahroom
(v) Har aib se mana ke juda hojai Firaque Gorakhpuri

PRESCRIBED TEXTBOOKS:

1. Prose & Poetry
- Nawa-e-Urdu (NCERT)
2. Urdu Grammar Book
- NCERT

MATHEMATICS

UNIT I : NUMBER SYSTEMS

1. Real Numbers

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.

Exercises: 1.1, 1.2 and 1.4

UNIT II : ALGEBRA

1. Polynomials

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.

Exercises: 2.1, 2.2 and 2.3

2. Pair Of Linear Equations In Two Variables

Pair of linear equations in two variables. Geometric representation of different possibilities of solution/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.

Exercises: 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.11, 3.12, 3.13, 3.14 and 3.20

3. Quadratic Equations

Standard form of a quadratic equation $ax^2 + bx + c = 0$, ($a \neq 0$). Solution of a quadratic equation (only real roots) by factorisation and completing the squares, i.e., by using quadratic formula. Relationship between the discriminant and nature of roots. Problems related to day – to – day activities to be incorporated.

Exercises: 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.8, 4.9 and 4.15

4. Arithmetic Progressions

Motivation for studying Arithmetic Progression. Derivation of standard results of finding the n^{th} term and sum of the first n terms.

Exercises: 5.1, 5.2, 5.3 and 5.5

UNIT III : TRIGONOMETRY

1. Trigonometric Ratios

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° and 90° . Values (with proofs) of the trigonometric ratios of 30° , 45° and 60° . Relationships between the ratios.

Exercises: 8.1, 8.2, 8.3, 8.7, 8.8 and 8.10

2. Trigonometric Identities

Proof and applications of the identity $\sin^2 A + \cos^2 A = 1$, $\tan^2 A + 1 = \sec^2 A$, $\operatorname{Cosec}^2 A = 1 + \cot^2 A$. Only simple identities to be given. Trigonometric ratios of complementary angles.

Exercises: 8.11, 8.12, 8.13, 8.14, 8.15 and 8.17

3. Heights And Distances

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° , 45° , 60° .

Exercises: 9.1 and 9.2

UNIT IV : COORDINATE GEOMETRY

1. Lines (In two-dimensions)

Review the concepts of coordinates 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.

Exercises: 7.1, 7.2, 7.3 and 7.5

UNIT V : GEOMETRY

1. Triangles

Definitions, examples, counter examples of similar triangles.

- i) (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.
- ii) (Motivate) If a line divides two sides of a triangle in the same ratio, the line is parallel to the third side.
- iii) (Motivate) If in two triangles, the corresponding angles are equal, their corresponding sides are proportional and the triangles are similar.
- iv) (Motivate) If the corresponding sides of two triangles are proportional, their corresponding angles are equal and the two triangles are similar.
- v) (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.
- vi) (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.
- vii) (Prove) The ratio of the areas of two similar triangles is equal to the ratio of the squares on their corresponding sides.
- viii) (Prove) In a right triangle, the square on the hypotenuse is equal to the sum of the squares of the other two sides.
- ix) (Prove) In a triangle, if the square on one side is equal to the sum of the squares of the other two sides, the angle opposite to the first side is a right angle.

Exercises: 6.1 [Only Numerical Problems are included]

Exercises: 6.2, 6.3 [Only Numerical Problems are included]

6.4, [Only Numerical Problems are included]

6.6, 6.7 and 6.8 [Both Numerical & Theoretical Problems are included]

2. Circles

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

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

Exercises: 10.1, 10.2 and 10.3

3. Constructions

- i) Division of a line segment in a given ratio (internally).
- ii) Tangent to a circle from a point outside it.
- iii) Construction of a triangle similar to a given triangle.

Exercises: 11.1, 11.2 and 11.3

UNIT VI : MENSURATION

1. Areas Of Plane Figures

Motivate the area of a circle; area of sectors and segments of a circle. Problems based on area and perimeter/circumference of the above said plane figures. (In calculating area of segment of a circle, problem should be restricted to central angles of 60° , 90° , and 120° only. Plane figures involving triangles, simple quadrilaterals and circles should be taken).

Exercises: 12.1, 12.2, 12.3 and 12.4

2. Surface Areas And Volumes

- 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 converting one type of metallic solid into another and other mixed problems. (Problems with combination of not more than two different solids may be taken).

Exercises: 13.1, 13.2, 13.3 and 13.4

UNIT VII : STATISTICS AND PROBABILITY

1. Statistics

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

Exercises: 14.1, 14.3, 14.4 and 14.5

2. Probability

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

Exercises: 15.1, 15.2 and 15.5

PRESCRIBED TEXTBOOK:

- **Core Mathematics For Class 10**
Goyal Brothers Prakashan, 11/1903, Chuna Mandi, Pahar Ganj, New Delhi -
110055.

NOTE: Only the above mentioned exercises are to be studied and the rest may be omitted.

SCIENCE & TECHNOLOGY

DISTRIBUTION OF MARKS

(THEORY)

UNIT I PHYSICS

(Total Marks = 26)

1. **Reflection Of Light** - Laws of reflection; convergence and divergence of light; images formed by a concave mirror, convex mirror; related concepts; centre of curvature, principal axis, optical centre, focus, focal length, mirror formula, magnification (with sign convention) numericals to be taken.

2. **Refraction Of Light** - Laws of refraction, refractive index of the medium, absolute refractive index, refractive index and speed of light in a medium, images formed by a convex and concave lenses, lens formula with sign convention, magnification produced by lenses, power of a lens (with numericals).

3. **The Human Eye And The Colourful World** - Human eye - power of accommodation - far point, near point of the eye, problems of vision and remedies, twinkling of stars, dispersion of light, atmospheric refraction, scattering of light.

4. **Electricity** - Electric current, electric potential, potential difference, electric circuit, Ohm's law, electrical resistance, electric resistivity, conductors, resistors and insulators, combination or grouping of resistors: series, parallel (formula only no derivation) and numericals to be taken. Heating effect of electric current, application of a heating effect of current, electric fuse and bulb, electric power, inter-relation between P, V, I and R (numericals to be taken), calculation of the cost of electrical energy.

5. **Magnetic Effects Of Electric Current** - Magnet, compass, magnetic field lines, field due to a current carrying wire, field due to current carrying coil or solenoid, force on current carrying conductor, Fleming's left hand rule, electric motor (principle, working and construction), electromagnetic induction induced potential differences, induced current, electric generator, construction, principle and working of AC generator, Direct current, Alternating current, Advantages of AC over DC, Domestic electric circuits.

UNIT II CHEMISTRY

(Total Marks = 26)

1. **Chemical Reactions** - Chemical equations, types of chemical reactions, combination, decomposition, double displacement (precipitation and neutralization), oxidation and reduction in terms of gain and loss of oxygen and hydrogen atom (definition with first three examples), corrosion and rancidity.

2. **Acids, Bases and Salts** - Definitions of Acids and bases (Arrhenius and Bronsted and Lawry's concept), General properties of acids and bases, salt, type of salt - acid and normal salt, double salt, mixed salt, complex salt, common salts, definition with two examples each. Properties and uses of bleaching powder, washing soda and baking soda.

3. Metals, Non-Metals and Metallurgy - Metals and non-metals, their physical properties, metallic bonds, chemical properties of metals and non-metals. Occurrence of metals, minerals and ores. Extraction of metals from their ores. Metallurgy (concept of ores, conversion of concentrated ores into metal oxide, extraction by the reduction of metal oxide to metal, refining of metal - distillation, liquification, oxidation and electro-refining).

4. Classification of Elements - Mendeleev's Periodic Law, Modern Periodic Law, Modern Periodic Table, Electronic configuration of elements.

5. Carbon and its Compounds - Bonding of carbon compounds, allotropies of carbon, hydro-carbons, homologous series, paraffin series, classification of hydro-carbons, nomenclature of organic compounds. Functional groups; alkane - only properties and uses of methane, ethane, alcohols (methanol and ethanol), carboxylic acids (ethanoic acids). Soap-cleansing action of soap.

UNIT III BIOLOGY

(Total Marks = 28)

1. Life Processes

(a) Nutrition - Modes of nutrition, Nutrition in amoeba, Photosynthesis - significance, raw materials, factors affecting photosynthesis, Nutrition in Human - alimentary canal and associated digestive glands, physiology of digestion with steps of digestion.

(b) Respiration - Respiration in plants, gaseous exchange in animals, body surface/skin, airtubes/trachea, gills, lungs. Type of respiration - aerobic and anaerobic. Respiration in human - parts (description), breathing mechanism (distinction between breathing and respiration), gaseous exchange in lungs and tissues.

(c) Transportation - Transport of materials in plants (water and minerals), Root hairs, conducting tissues, xylem. Transpiration (definition), working of stomata. Translocation - phloem vessels. Transportation of materials and fluids in human beings - composition of blood and functions of each component, blood vessels, diagram of external and internal structure of human heart, cardiac cycle, ECG, blood pressure, Lymphatic system.

(d) Excretion - Excretion in animals, human beings. Osmoregulation and artificial kidney. Diagram of urinary system and nephron (urine formation).

2. Control And Coordination - Coordination in plants and plant hormones, nervous system in lower animals, vertebrates and human being. Reflex action, peripheral nervous system; autonomic nervous system and chemical coordination in animals (diagram of neuron); animal hormones.

3. Reproduction In Plants And Animals - Reproduction - Types of reproduction, types of asexual reproduction. Vegetative reproduction by natural and artificial methods and advantages of asexual reproduction in plants. Sexual reproduction in plants.

Reproductive system in human beings (male and female) (fertilization, pregnancy and development of the embryo excluded). Birth control, sexually transmitted diseases.

4. Heredity And Evolution - Definition of heredity; genetics, chromosome, variation, gene, genotype and phenotype, Mendel's Law of inheritance. Evolution - definition. Morphological and anatomical evidences of evolution, origin of life on the earth - Oparin and Haldane theory.

PRESCRIBED TEXTBOOKS: **Science & Technology Class 10 (Updated Edition)**
- Ratna Sagar Pvt. Ltd., 60,
Dr. Sundari Mohan Avenue, Kolkata - 700014.

(PRACTICAL)
(Total Marks = 20)

Every student will perform atleast fifteen experiments (atleast five experiments from each unit) during the academic year.

PHYSICS

1. To verify the laws of reflection of light by using plane mirror.
2. To determine the focal length of a concave mirror by obtaining image of distant object.
3. To trace the path of a ray of light passing through a rectangular glass slab and measure the angle in incidence and angle of emergence.
4. To determine the focal length of a convex lens by focusing a distant object.
5. To trace the path of a ray of light passing through a glass prism and measure the angle of deviation.
6. To study the dependence of current on the potential difference across a resistor and determine its resistance.
7. To find out the equivalent resistance of two resistors connected in (i) series and (ii) parallel.

BIOLOGY

1. To study land food chain from the given chart.
2. Construction of food web using models.
3. To study the different parts of a Hibiscus flower.
4. To study germination of grams/ pea seeds.
5. To test the presence of starch in a given food sample.
6. To study various things around and classify them into living and non-living.
7. To study various waste materials and classify them into bio-degradable and non-biodegradable wastes.
8. Collection of news paper reports on HIV/ AIDS.

CHEMISTRY

1. To measure the change in temperature during chemical reactions (at least four) and conclude whether the reaction is exothermic or not.

2. To identify bleaching powder from the given samples of chemicals (four samples).
3. To identify washing soda or baking soda from the given samples of chemicals (four samples).
4. To study on precipitation reaction and isolation of the precipitate:
 - (i) NaCl with AgNO_3 ,
 - (ii) Na_2SO_4 with BaCl_2
5. To prepare Sulphur dioxide gas and study its two physical and two chemical properties.
6. To carry out the reactions for an acid (HCl) with (i) Litmus solution (blue and red), (ii) Zinc metal, (iii) Sodium carbonate and (iv) Sodium hydroxide.
7. To prepare ammonia gas and study its two physical and two chemical properties.
8. To study any two physical and two chemical properties of acetic acid.
9. To identify whether a given solution is acidic or basic performing following tests:
 - (i) Litmus test,
 - (ii) Reaction with NaHCO_3 / Na_2CO_3 ,
 - (iii) Reaction with NH_4OH / $(\text{NH}_4)_2\text{CO}_3$
 - (iv) Reaction with little excess of volumes of HCl or NaOH (as a case may be) and performing the litmus test with the resulting solution (strength of unknown solution supplied and acid/ base solution given for experiment 4 must be the same)
10. To study the decomposition of CaCO_3 and prove that CO_2 is evolved during the reaction (lime water test)
11. To perform the reaction of 1: 1 molar acetic acid and carboxylic acid and observe the changes in terms of:
 - (i) Colour
 - (ii) Litmus test (acidic/ alkaline)
12. To examine the heating effect on sugar and common salt, observe the change and hence to comment on the nature of bonding in the two compounds.
13. To determine the pH values of equimolar concentration of four acids and arrange them in order of their increasing acidity.

PRESCRIBED TEXTBOOKS: **Tushar's Laboratory Manual**
 Tushar Publications Pvt. Ltd.,
 C-21, Jhandewalan F. F. Complex,
 Rani Jhansi Road, New Delhi - 110055.

SOCIAL STUDIES

TOPICS TO BE READ

SECTION I : HISTORY

UNIT I: EVENTS AND PROCESSES

1. Nationalism in Europe
2. Nationalism in India-I: Khilafat Movement and Non-Cooperation Movement
3. Nationalism in India-II: Quit India Movement and Social Movement

UNIT II: LIVELIHOODS, ECONOMICS AND SOCIETIES

4. Industrialization 1850 - 1950
5. Urbanization and Urban Lives

UNIT III: CULTURE, IDENTITY AND SOCIETY

6. Print, Culture and Nationalism

SECTION II: CIVICS

- | | |
|-----------------|---|
| Unit I: | 1. Role of Caste in Indian Politics and Communalism |
| Unit II | 2. Nature of Indian Federal Structure |
| Unit III | 3. Decentralisation: Panchayati Raj Institutions |
| Unit IV | 4. Political Parties |
| | 5. Popular Struggles and Movements |
| Unit V | 6. Towards A Successful Democracy |
| Unit VI | 7. Challenges to Democracy |
| | 8. Outcomes of Democracy |
| | 9. Electoral Education |

SECTION III: ECONOMICS

1. The Story of Development
2. Sectors of the Indian Economy
3. Money and Financial System
4. Globalisation and the Indian Economy
5. Consumer Rights

SECTION IV: GEOGRAPHY

1. Resources: Concept and Planning
2. Land and Soil Resource
3. Agriculture
4. Water Resources
5. Minerals and Energy Resources
6. Manufacturing Industries
7. Lifelines of National Economy
8. Meghalaya: An Overview
9. Climate
10. Forest Resource
11. Agriculture in Meghalaya

Disaster Management

12. Survival Skills
13. Planning Ahead

PRESCRIBED TEXTBOOK:

- **A Textbook of Social Studies 10 (Revised and Updated)**
Published by - Sunflower Publishers Pvt. Ltd.,
542/16, Joshi Road, Karol Bagh,
New Delhi - 110005.

HEALTH EDUCATION

Total Marks : 80

Internal : 20

Units to be read

Unit I Growth and Development

1. How Mature Are You?
2. You and Your Family
3. Marriage and Family Life

Unit II Diseases

1. Some Defence Measures Against Diseases (Immunity and Immunization)
2. National Health Programme
3. Importance of Pupil's and People's Participation in the Implementation of These Programmes
4. Primary Health Care, Meaning and Scope, Health Care Set Up in Rural and Urban Areas

Unit III Consumer Education

1. Consumer Education - Consumer Rights, Making Correct Choices While Buying
Different Items, Food Adulteration
2. Systems of Medicine and Quackery
3. Drugs, Medicines and Self-Medication

Unit IV International Health

1. Importance of International Health

Unit V Life Skills Education

1. Teenage Pregnancy
2. Sexually Transmitted Infections
3. Basic Facts About HIV/AIDS
4. Prevention Against HIV/AIDS

PRESCRIBED TEXTBOOK:

- Health - Class X

A Textbook for Secondary Schools (Meghalaya Edition)

Frank Brothers & Co. (Publishers) Ltd., 4675-A, 21 Ansari Road, Daryaganj,
New Delhi - 110002.

COMPUTER SCIENCE

1. Number Systems
2. Computer Logic
3. Do it in DOS
4. Linux - A Peep into Open Source Software
5. Introducing QBasic
6. The Operators
7. Programs, At Last!
8. Programming Tools
9. Branching Statements
10. The Loops
11. Library Functions
12. Subprograms & Functions
13. The Arrays
14. Introduction to Java Concepts - The Basics
15. Conditionals and Branching
16. Object-Oriented Programming Concepts
17. Library Classes
18. Encapsulation and Arrays
19. Error Trapping and Debugging in QBasic
(Optional Reading)

Recent Trends in Computer Science/Applications

ENVIRONMENTAL EDUCATION

PRESCRIBED TEXTBOOK:

- **Frank Environmental Education X**
Frank Brothers & Co. Ltd., 4675-A, Ansari Road, 21 Daryaganj,
New Delhi - 110002.

Pieces to be read - Whole Book

CREATIVE EXPRESSION

PRESCRIBED TEXTBOOK:

- **Learning Visual Language 8**
Tulip Publications Pvt. Ltd., C-21, Jhandewalan F. F. Complex, Rani Jhansi Road,
New Delhi - 110005.

Pieces to be read - Whole Book

WORK EXPERIENCE/SOCIALLY USEFUL PRODUCTIVE WORK

PRESCRIBED TEXTBOOK:

- **A Textbook of SUPW Vol. II**
Pitambar Publishing Co. (P) Ltd., East Park Road, Karol Bagh,
New Delhi - 110005.

Pieces to be read - Whole Book

Distribution of Marks
Class IX
Computer Science

Unit	Topic	Theory	Practical Mark
1	History of Computers Hardware & Software Operation Systems Commands	16	
2.	Working in Exel Entering Data Working with Workbook Function and Shortcut-keys	8	5
3.	Using Formulae Using Ranges Formatting	9	3
4.	Printing Errors Functions	8	2
5A	Charts Filters Sorting	8	4
6A	MS-Access	8	2
6B	Introduction to programming	5	2
6B	Introduction to QBasic Commands and Library Functions	5	2
6C	Introduction to Visual Basic	5	2
7	Computer Communication and Networking	5-	
	Total	80	20