

ENGLISH

DISTRIBUTION OF MARKS

1.	Prose	-	25
2.	Poetry	-	15
3.	Rapid Reader	-	10
4.	Grammar & Composition	-	30
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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 external 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 Shiksa - 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 (Tadhit 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** - **Dharma Sinha Deka.**
- (ii) **Prabashika Rachana Shiksa** - **Giridhar Sarma.**
- (iii) **Assamiya Rachana Shiksa** - **Dr Lila Gogie, Dr Nabin Sarma.**

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 Bandopadhyaya

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 Bhargava
- 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 Ramavtar 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 Mawbynna; 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 jinglailuid; 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) - Chautera (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
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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*
- c. 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

5. Jalwae Darbar-e-Dehli
6. Haquiquat-e-Husn
7. Aandhi
8. O-Des-Se A'anewale Bata

Poets

- Akbar Illahabadi
Mohammad Iqubal
Kaifi Azami
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.

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
CLASS X

Syllabus and Distribution of Marks:

Section A (Computer Fundamentals) – 20 marks

Unit	Topic	Theory Marks	Practical
1	Number System	12	-
2	Computer Logic	8	-

Section B (Operating Systems) – 20 marks

Unit	Topic	Theory Marks	Practical
3	Do it in DOS	12	3
4	Linux	8	2

Section C (QBasic Programming) - 28 Marks

Unit	Topic	Theory Marks	Practical
5	Introducing QBasic	14	5
6	The Operators		
7	Programs, at Last!		
8	Programming Tools		
9	Branching Statements		
10	The Loops	14	5
11	Library Functions		
12	Subprograms & Functions		
13	The Arrays		

Section D – (Java Concept) – 12 marks

Unit	Topic	Theory Marks	Practical
14	Introduction to Java Concept	12	5
15	Conditionals & Branching		
16	Object Oriented Programming		
17	Library Classes		
18	Encapsulation and Arrays		
	TOTAL	80	20

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

SCIENCE and TECHNOLOGY
(THEORY)
CLASS - X

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) numerical 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 numerical).

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.

Recapitulate writing chemical formulas studied in earlier classes.

Rules for writing word equation.

Writing a skeletal chemical equation using the chemical formula of the reactants and the products.

Writing balanced chemical equations.

Types of Chemical Reactions

1. Combination reactions

a. Combination of two elements to form a compound

b. Combination of an element and a compound to form new compound

c. Combination of two compounds to form a new compound

2. ***Decomposition reactions***

- a. Thermal decomposition reactions
- b. Electrolytic decomposition reactions

3. ***Displacement reactions***

Demonstration of a displacement reaction
Uses of the activity series

4. ***Double Displacement reactions***

- Precipitation Reaction
- Neutralization Reaction
- Irreversible Reaction

Oxidation

- a. Addition of oxygen
 - i) Burning of carbon
 - ii) Burning of sulphur
 - iii) Burning of phosphorous
 - iv) Burning of magnesium
 - v) Rusting of iron
- b. Removal of hydrogen
 - i) Oxidation of hydrogen sulphide by bromine
 - ii) Oxidation of hydrochloric acid by magnesium (IV) oxide
 - iii) Removal of hydrogen from HCl

Reduction

- a. Removal of oxygen
 - i) Reduction of copper (II) oxide with hydrogen
 - ii) Reduction of iron (III) oxide
 - iii) Reduction of manganese (IV) oxide with aluminium
 - iv) Burning of magnesium
 - v) Rusting of iron

Oxidizing and reducing Agents

- Oxidizing agent
- Reducing agent
- Relation between oxidation and reduction
- Difference between oxidation and reduction

Effects of Oxidation Reactions in everyday life

Corrosion - Only Definition

- Conditions necessary for the occurrence of corrosion

- Prevention of corrosion – (Any three)

▪

Rusting of Iron – Only Definition

- Conditions necessary for rusting
- Prevention of rusting – (Any three)

Rancidity – Only Definition

Chapter 2 – Acids, Bases and Salts

Arrhenius Concept of Acid and Bases

Limitations of Arrhenius concept

Bronsted – Lowry’s Proton Concept of Acids and Bases

Limitations of Bronsted – Lowry’s concept

General Properties of Acids

- Physical properties of acids
- Chemical properties of acids
 1. Action of Litmus
 2. Reaction with carbonates and hydrogen carbonates
 3. Reaction with bases (Neutralisation)
 4. Reaction with metals

Classification of Acids

1. Classification on the Basis of Strength
 - a. Strong acids
 - b. Weak acids
2. Classification on the Basis of their Basicity
 - a. Monobasic acids
 - b. Dibasic acids
 - c. Tribasic acids

Storing of curd and other sour substances in metal vessels.

Storing and transporting acids on a small and large scale.

Acids in the living world.

Handling of acids in the laboratory.

Uses of acids.

Soda – acid fire extinguisher.

P^H Scale and Universal Indicator

Relationship between the concentration of H⁺(aq) ions and P^H of solution

P^H sensitivity of animals and plants.

P^H in daily life

1. P^H in digestive system
2. P^H dependent tooth decay
3. Acids in joints and fatigued muscles
4. Self protection of plants and animals through chemical warfare

5. Role of P^H in blood
6. Functions of enzymes at definite P^H
7. Function of Kidney against wide variety of P^H
8. Acids in regaining of tarnished copper utensils

Alkalis

Classification of Bases

1. Classification on the Basis of Strength
 - a. Strong base
 - b. Weak base
2. Classification on the Basis of their Acidity
 - a. Monoacidic base
 - b. Diacidic base
 - c. Triacidic base

General Properties of Acids

- Physical properties of bases
- Chemical properties of bases
 1. Action of Litmus and indicators
 2. Action with Ammonium salts
 3. Amphoteric behaviour of some bases
 4. Action with acids (neutralization)
 5. Application of neutralization reactions
 6. Action with metals

Use of the term 'concentrated' and 'strong' in acids and bases

Uses of Acids and Bases

Basicity of Acids

Salts

Types of Salts

1. Acid Salts
2. Normal Salts
3. Basic Salts
4. Double Salts
5. Common Salt

Bleaching Powder

Uses of bleaching powder

Solvay process for manufacture of baking soda and washing soda

Uses of sodium hydrogen carbonate

Uses of sodium carbonate

Preparation of Salts

General properties of salts

1. Solubility
2. Electrical conductivity
3. Crystalline nature – Water of crystallization with common examples
4. Deliquescence
5. Hygroscopic Substances
6. Efflorescence
7. Hydrolysis

Uses of some common salts

Chapter 3 – Metals, Non – Metals and Metallurgy

Metals

Properties of Metals

▪ Physical properties

1. Physical state
2. Hardness
3. Tensile strength
4. Density
5. Metallic lusture
6. Malleability and ductility
7. Melting point and boiling point
8. Thermal and electrical conductivity
9. Elasticity
10. Electron emission
11. Sonority
12. Formation of alloys

▪ Chemical properties of metals

- Electropositive character
- Activity series of metals
- Chemical Reactions of Metals
 1. Reaction with oxygen (amphoteric oxides)
 2. Reaction with water
 3. Reaction with salt solutions (Displacement reactions)
 4. Reaction with strong alkalis

Non - Metals

General characteristics of Non – metals

▪ Physical properties

- a. Hardness
- b. Density

- c. Malleability and ductility
- d. Lusture
- e. Melting point and boiling point
- f. Thermal and electrical conductivity
- g. Sonority
- h. Allotropy

- **Chemical properties**
 - Electronegative character
 - a. Reaction with oxygen
 - b. Reaction with water
- Comparison of properties of Metals and Non – Metals
- How do metals react with non – metals
- Octet rule,
Ionic compound
Examples of Ionic compounds
- Properties of Ionic compounds
 1. Physical Nature
 2. Melting and boiling points
 3. Solubility
 4. Electrical conductivity
 5. Aggregates
- Occurrence of Metals
- Minerals and ores
- Minerals found in India
- Activity series and Metallurgical Processes

Extraction of Metals from their Ores (Metallurgy)

1. Concentration of ore – *(only names of concentration process, details not required)*
 - a. Gravity separation method (Lavigation)
 - b. Froth Floatation Process
 - c. Chemical separation (Leaching)
2. Conversion of concentrated ore into metal oxide – *only definition and distinction of the following*
 - a. Calcination
 - b. Roasting
3. Extraction of the metal by reduction of metal oxide

- a. Reduction by heat alone (Self – reduction) (*Hg, Cu*)
 - b. Chemical Reduction (*Zn & Fe*)
 - Advantages of Carbon reduction process
 - Disadvantages of Carbon reduction process
 - Aluminothermic reduction
 - c. Electrolytic reduction (*only Al*)
4. Refining of impure metals (*only names of different processes and details of only Electrorefining*)
- a. Distillation
 - b. Liquidation
 - c. Oxidation
 - d. Electrorefining
 - e. Vapour phase refining
 - f. Van Arkel Method
 - g. Zone refining

Chapter 4 – Classification of Elements

Newlands' Law of Octaves

Mendeleev's Periodic Law

1. *Merits of Mendeleev's Periodic Table*
 - a. Systematic classification of elements
 - b. Prediction of undiscovered elements
 - c. Electronic configuration of elements
2. *Defects of Mendeleev's Periodic Table*
 - a. Discrepancy in periodicity
 - b. Position of hydrogen
 - c. Violation of one position for one element rule

Modern Periodic Law

1. Explanation for the positions of some elements
2. Positions for elements having identical properties in different groups
3. Justification of placing dissimilar elements together
4. One position for one element

Description of Modern Periodic Law

- Electronic configuration of elements
- Periodic trends in atomic properties
 1. Electropositive or metallic character
 2. Ionisation energy
 3. Electron affinity
 4. Electronegativity

Chapter 5 – Carbon and its Compounds

A. Bonding of Carbon Compounds – The Covalent Bond

- Hydrogen Molecule
- Hydrogen Chloride
- Oxygen Molecule
- Nitrogen Molecule

B. Allotropes of Carbon

C. Properties of Covalent Compounds

D. Hydrocarbons, Homologous Series, Characteristics of a Homologous Series, Paraffin Series

E. Classification of Hydrocarbons

1. Saturated hydrocarbons
 - a) Straight Chain
 - b) Branch Chain
 - c) Ring Chain
2. Unsaturated hydrocarbons

F. Nomenclature of Organic Compounds and Functional Group

G. Alkanes

General Properties of Alkanes

1. Physical States
2. Solubility

Chemical Properties of Alkanes

1. Combustion
 - a) In excess of air or oxygen
 - b) In limited supply of air or oxygen
 - c) In very less supply of air or oxygen
2. Halogenation
3. Cracking:
 - i) Thermal Cracking
 - ii) Catalytic Cracking

H. Natural Gas

Uses of Natural Gas

I. Methane

Properties of Methane:

1. Physical Properties (all included)
2. Chemical Properties (all included)

Uses of Methane

Methane and Greenhouse effect

Ethane

Properties of Ethane:

1. Physical Properties (all included)
2. Chemical Properties (all included)

Uses of Ethane

J. Alcohols

Naming of Alcohols, Structural and Electron - Dot formulae of some alcohols.

Methanol

Properties of Methanol

1. Physical Properties (all included)
2. Chemical Properties (all included)

Uses of Methanol

Ethanol

Properties of Ethanol

1. Physical Properties (all included)
2. Chemical Properties (all included)

Uses of Ethanol

Harmful effect of drinking Alcohols

Methylated or denaturated spirit

K. Carboxylic Acids

L. Ethanoic Acid (Acetic Acid)

Properties of Ethanoic Acid

1. Physical Properties of Ethanoic Acid (all included)
2. Chemical Properties of Ethanoic Acid (all included)

Tests for Carboxylic Acid

Uses of Ethanoic Acid

M. Soaps

Soap Molecule

Types of Soaps

1. Hard Soaps
2. Soft Soaps
3. Transparent Soaps

Manufacture of Soaps

Raw materials needed for manufacture of soap

Processes for Manufacture of Soap

1. Hot process
2. Ittner and Twitchell process

Cleansing Action of Soap

Limitations 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.

(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:

1. **Science & Technology Class 10**
Ratna Sagar Pvt. Ltd., 60, Dr. Sundari Mohan Avenue, Kolkata - 700014.
2. **Tushar's Laboratory Manual**
Tushar Publications Pvt. Ltd., C-21, Jhandewalan F. F. Complex, Rani Jhansi Road, New Delhi - 110055.
