



SCHOOL EDUCATION & LITERACY  
DEPARTMENT  
GOVERNMENT OF SINDH

Karachi. Dated: December 09<sup>th</sup> 2019

**NOTIFICATION**

NO. SO/G-III/SELD/CA/CW/305 /2019: In compliance to the Orders of Honorable High Court of Sindh Circuit Court, Hyderabad Sindh dated 02/08/2019 passed in CP no.1817/2016,2894/2017 and 1890/2019, the School Education & Literacy Department, Govt. of Sindh is pleased to approve the following Scheme of Studies and bifurcation of the subjects Mathematics, Physics, Chemistry, Biology and Computer Science for Class IX and X and Uniformity in marks of Secondary School Certificate (SSC Part-I & II) in line with National Scheme of Studies developed by the Directorate of Curriculum, Assessment and Research (DCAR).

**Scheme of Studies for Grade IX – X**

**Academic Year 2020- 21**

| S. No. | Subjects  | Marks       |             |             |
|--------|---|-------------|-------------|-------------|
|        |   | Grade IX    | Grade X     | TOTAL       |
| 1      | English   | 100         | 100         | 200         |
| 2      | Sindhi (MT)/<br>Urdu (MT)/<br>History Geography of Pakistan (foreign students only) | 75          | -           | 75          |
| 3      | Sindhi (Slaees)/ Urdu (Slaees) (NMT)  | -           | 75          | 75          |
| 4      | Islamiat/<br>Ethics for non-Muslims   | 75          | -           | 75          |
| 5      | Pakistan Studies  | -           | 75          | 75          |
| 6      | Mathematics   | 75          | 75          | 150         |
| 7      | Physics (Th+Pr)   | (60+15) =75 | (60+15) =75 | 150         |
| 8      | Chemistry (Th+Pr)   | (60+15) =75 | (60+15) =75 | 150         |
| 9      | Biology (Th+Pr)/<br>Computer Science (Th+Pr)  | (60+15) =75 | (60+15) =75 | 150         |
|        | <b>Total</b>  | <b>550</b>  | <b>550</b>  | <b>1100</b> |

Key:

MT= Mother Tongue  
NMT= Non Mother Tongue  
Th= Theory  
Pr= Practical



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**Scheme of Studies and Bifurcation of the Textbook for Mathematics Grade IX - X  
Justification of Grade- wise bifurcation of Mathematics for Academic Year 2020- 21**

| Change/<br>Rearrangement  | Rationale:  |
|---|---|
| Unit 6 "Algebraic sentence" is shifted in Grade X.                  | The bifurcation of proposed scheme of studies prepared according to the national curriculum 2000 as well as existing textbook of mathematics for grade IX-X   |
| Unit 12 "demonstrative Geometry" has been distributed in two parts. | To introduce Geometry in grade-IX, and continue in grade-X, it is proposed as follows;<br>First part of unit 12 "theorem based on line" is proposed for study in grade IX Grade.<br>The second part of unit 12 "theorem based on triangle" proposed for grade-X, in the light of curriculum and the weightage of units. |

**Units of Mathematics for Grade IX**

|         |  |
|---------|--|
| Unit 1  | Sets   |
| Unit 2  | System of real Numbers, Exponents and Radicals           |
| Unit 3  | Logarithms   |
| Unit 4  | Algebraic Expressions                                    |
| Unit 5  | Factorization, HCF, LCM, Simplification and Square Roots |
| Unit 7  | Matrices   |
| Unit 11 | Fundamental Concepts of Geometry                         |
| Unit 12 | Demonstrative Geometry – Theorems based on lines         |

**Units of Mathematics for Grade X**

|         |  |
|---------|--|
| Unit 6  | Algebraic Sentences  |
| Unit 8  | Elimination  |
| Unit 9  | Variations   |
| Unit 10 | Information Handling   |
| Unit 12 | Demonstrative Geometry – Theorems based on triangles and other polygon |
| Unit 13 | Circle   |
| Unit 14 | Practical Geometry   |
| Unit 15 | Trigonometry   |

*[Handwritten mark]*



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Scheme of Studies and Bifurcation of the Textbook for Physics Grade IX - X  
Justification of Grade-wise bifurcation of Physics for Academic Year 2020- 21

| Change/<br>Rearrangement                        | Rationale:  |
|---|---|
| Unit 9: "Simple Machines" is shifted to Grade X | Students have already studied "Simple Machines" in previous grades; hence it is low difficulty level unit. As there are higher difficulty level chapters in the grade-X, therefore, Unit 9- "Simple Machines" is shifted to Grade X this will balance the difficulty level among units. |
| Unit 11 "Heat" is shifted to Grade IX           | The Unit 11 "Heat" is shifted to Grade IX as it is more related with the unit "Properties of Matter".   |

Units of Physics for Grade IX

|         |                                 |
|---------|---------------------------------|
| Unit 1  | Introduction                    |
| Unit 2  | Measurement                     |
| Unit 3  | Kinematics of Linear Motion     |
| Unit 4  | Motion and Force                |
| Unit 5  | Vectors                         |
| Unit 6  | Equilibrium                     |
| Unit 7  | Circular Motion and Gravitation |
| Unit 8  | Work, Power and Energy          |
| Unit 10 | Properties of Matter            |
| Unit 11 | Heat                            |

Units of Physics for Grade X

|         |  |
|---------|--|
| Unit 9  | Simple Machines                              |
| Unit 12 | Waves and Sounds                             |
| Unit 13 | Propagation and Reflection of Light          |
| Unit 14 | Refraction of Light and Optical Instruments  |
| Unit 15 | Nature of Light and Electromagnetic Spectrum |
| Unit 16 | Electricity                                  |
| Unit 17 | Magnetism and Electro Magnetism              |
| Unit 18 | Electronics                                  |
| Unit 19 | Nuclear Physics                              |





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**Scheme of Studies and Bifurcation of the Textbook for Chemistry, Grade IX –X**  
**Justification of Grade- wise bifurcation of Chemistry for Academic Year 2020- 21**

| <b>Change/<br/>Rearrangement</b>                             | <b>Rationale:</b>  |
|--|--|
| Unit No. 1 to unit No. 10 are proposed for study in Grade IX | The content weightage, course workload on students and unit linkages are already in progression, therefore initial ten units are assigned in grade IX.                 |
| Unit No. 11 to unit No. 18 are proposed for study in Grade X | The rest of eight units are proposed for study in grade X as the difficulty level and workload is equal to initial ten units. There is proper linkage among the units. |

**Units of Chemistry for Grade IX**

|         |                           |
|---------|---------------------------|
| Unit 1  | Introduction to Chemistry |
| Unit 2  | Chemical Combination      |
| Unit 3  | Atomic structure          |
| Unit 4  | Periodicity of Elements   |
| Unit 5  | Chemical Bonding          |
| Unit 6  | State of Matter           |
| Unit 7  | Solution and Suspension   |
| Unit 8  | Electro Chemistry         |
| Unit 9  | Acids, Bases and Salts    |
| Unit 10 | Chemical Energetics       |

**Units of Chemistry for Grade X**

|         |                               |
|---------|-------------------------------|
| Unit 11 | Hydrogen and Water            |
| Unit 12 | Carbon, Silicon and Compounds |
| Unit 13 | Nitrogen and Oxygen           |
| Unit 14 | Sulphur and its Compounds     |
| Unit 15 | Halogens                      |
| Unit 16 | Metals and their Extraction   |
| Unit 17 | Organic Chemistry             |
| Unit 18 | Chemical Industries           |



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**Scheme of Studies and Bifurcation of the Textbook for Biology Grade IX - X  
Justification of Grade- wise bifurcation of Biology for Academic Year 2020- 21**

| <b>Change/<br/>Rearrangement</b>                     | <b>Rationale:</b>   |
|--|---|
| Unit 1 to Unit 10 are proposed for study in grade IX | The textbook units are properly and logically sequenced. The basis are provided at grade IX through units on living things, cell, tissues, breathing, food, glucose, energy and health.   |
| Unit 11 to Unit 19 are proposed for study in grade X | The units on Man and Biology are proposed in grade X, as these eight units are logical sequenced and properly linked having many common aspects. e.g. Transportation; reproduction, genes, evolution and environment are interlinked. |

**Units of Biology for Grade IX**

|         |                                      |
|---------|--------------------------------------|
| Unit 1  | Introduction to Biology              |
| Unit 2  | Structural Organization of Life      |
| Unit 3  | Classification of Living Organisms   |
| Unit 4  | Viruses, Bacteria and Cyanobacteria. |
| Unit 5  | Fungi and Algae                      |
| Unit 6  | Bryophytes and Tracheophytes         |
| Unit 7  | Invertebrata                         |
| Unit 8  | Chordata and Vertebrata              |
| Unit 9  | Food and Nutrition                   |
| Unit 10 | Respiration                          |

**Units of Biology for Grade X**

|         |                           |
|---------|---------------------------|
| Unit 11 | Transport in Organisms    |
| Unit 12 | Excretion                 |
| Unit 13 | Support and Movement      |
| Unit 14 | Response and Coordination |
| Unit 15 | Reproduction              |
| Unit 16 | Genes and Inheritance     |
| Unit 17 | Evolution                 |
| Unit 18 | Environmental Biology     |





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|         |                  |
|---------|------------------|
| Unit 19 | Man. and Biology |
|---------|------------------|

Scheme of Studies and Bifurcation of the Textbook for Computer Science Grade IX - X  
Justification of Grade- wise bifurcation of Computer Science for Academic Year 2020- 21

| Change/<br>Rearrangement   | Rationale:  |
|--|---|
| Unit No. 1 to unit No. 4 and unit No. 7 are proposed for study in Grade IX | The content weightage, course workload on students and unit linkages are already in progression, therefore initial 4 units are assigned in grade IX. However the unit 7 is practical based therefore unit 7 is assigned for hands on computer and practical work in grade IX. |
| Unit No. 5, 6 and 8 are proposed for study in Grade X                      | The rest of three units are proposed for study in grade X as the difficulty level and workload is balanced in both grades. There is proper linkage and progression among the units.   |

Units of Computer Science for Grade IX

|        |                          |
|--------|--------------------------|
| Unit 1 | Introduction to computer |
| Unit 2 | Computer components      |
| Unit 3 | Input/ Output devices    |
| Unit 4 | Storage devices          |
| Unit 7 | Computer Software        |

Units of Computer Science for Grade X

|        |                        |
|--------|------------------------|
| Unit 5 | Data representation    |
| Unit 6 | Boolean Algebra        |
| Unit 8 | Introduction to Widows |

AHSAN ALI MANGI  
SECRETARY TO GOVERNMENT OF SINDH

Dated: 9<sup>th</sup> December 2019

NO. SO/SELD/CA/CW/305/2019

A copy is forwarded for information and necessary action to:

- Registrar, High Court of Sindh, Circuit Court, Hyderabad
- Sindh The Chairman, Sindh Textbook Board, Jamshoro.
- The Director, Directorate of Curriculum, Assessment and Research & Jamshoro.
- The Chief Advisor, Curriculum Wing, SELD. Govt. of Sindh
- The Staff Officer to Secretary SELD, Govt. of Sindh,



(TAHIR JAMAL MANGI)  
(SECTION OFFICER G-III)