ACCELERATED LEARNING PROGRAMME (ALP)

تسريع التعليم برامج

مثالية

نيبال كيريلوم إنزين تيكس كيك بورد، لاهاور
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UNIT # 1: THE SAVIOUR OF MANKIND
Classwork: Glossary, Comprehension (B Qs: 1-4), Vocabulary (B & C), Grammar (B & C), Writing Skills (A)
Homework: Comprehension (B Qs: 5-8), Vocabulary (A & D), Grammar (A & D)

UNIT # 2: PATRIOTISM
Classwork: Glossary, Comprehension (A Qs: 1-5), Vocabulary (A & C), Grammar (A & B), Writing Skills (B)
Homework: Vocabulary (B), Grammar (C), Writing Skills (A)

UNIT # 4: HAZRAT ASMA
Classwork: Glossary, Comprehension (A, B, C), Vocabulary (B), Grammar (A, B, D & E), Writing Skills (A)
Homework: Comprehension (D), Vocabulary (A), Grammar (C, F & G)

UNIT # 5: DAFFODILS
Classwork: Glossary, Comprehension (A Qs: 1-5), Vocabulary (B & C), Grammar (C, D, E, F & G), Writing Skills (B)
Homework: Vocabulary (A), Grammar (A & B)

UNIT # 6: THE QUAIĐ’S VISION AND PAKISTAN
Classwork: Glossary, Comprehension (A Qs: 1-5), Vocabulary (A, D & E), Grammar (B, C, D, E & F), Writing Skills (B)
**Homework:** Vocabulary (B & C), Grammar (A)

**UNIT # 7: SULTAN AHMAD MASJID**

**Classwork:** Glossary, Comprehension (A Qs:1-6), Vocabulary (C & D), Grammar (B, C, D & E)

**Homework:** Vocabulary (A & B), Grammar (A)

**GRAMMAR & COMPOSITION**

**Classwork:** To your mother who is worried about your health, To your sister congratulating her on her success in the exams, To your father requesting him to send you some extra funds for the payments of hostel dues, To your friend condoling the death of his mother

**Homework:** To your friend congratulating her on her birthday, To your friend requesting him to lend you some books, To your sister thanking her for a gift

**STORY WRITING**

**Classwork:** A Farmer and His Sons, The Kindness of Rasoolﷺ, Robbers Turn into Good Citizens, The Muslim Brotherhood

**Homework:** A Friend in Need is a Friend Indeed, The Boy who cried “Wolf”

**DIALOGUE WRITING**

Between A Teacher and Student, Between Two students regarding Salaht

**COMPREHENSION OF A PASSAGE**

Classwork: (III), (IV), (V)  
**Homework:** (VII), (IX)

**COMPREHENSION OF A PASSAGE (EXERCISES)**

Classwork: (5), (7), (9)  
**Homework:** (13), (15)

**ACTIVE AND PASSIVE VOICE (Pages 168-170)**

**TRANSLATION (TENSES)**

All Translated Lessons of all tenses relating to affirmative, negative and interrogative sentences are included. All unsolved Exercices are excluded.

(Pages 69-137)

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**MATHEMATICS (Science Group)**

**UNIT - 1: MATRICES AND DETERMINANTS**

**Classwork:** Exercise: 1.1, Q: 1 (C), Q: 3, Exercise: 1.2, Q: 4 (A), Q: 5 (B), Q: 6 (i), Exercise: 1.3, Q: 1 (A), Q: 2 (B), Q: 3 (ii), Q: 4 (ii), Q: 5 (x), Q: 8 (i), Exercise: 1.4, Q: 1 (i,v), Q: 4 (a), Q: 5 (ii), Exercise: 1.5, Q: 1 (ii), Q: 2 (i), Q: 3 (i), Q:6 (i), Exercise: 1.6, Q: 1 (iii), Q: 4

**Homework:** Exercise: 1.1, Q: 1 (G, H), Exercise: 1.2, Q: 1-3, Q: 4 (D), Q: 5 (C, E), Q: 6 (ii), Exercise: 1.3, Q: 1 (B-F), Q: 2 (C, F), Q: 3 (iv, vi), Q: 4 (vi), Q: 5 (vi-ix), Q: 8 (ii, vi), Exercise: 1.4, Q: 1 (ii-iv), Q: 4 (d, e), Q: 5 (iv), Q: 6 (ii), Exercise: 1.5, Q: 2 (ii-iv), Q: 3 (iii, iv), Q: 6 (ii), Exercise: 1.6, Q: 1 (i, v), Q:3,

Review Exercise: 1, Q: 1, Q: 3, Q: 5, Q: 7 (ii)
UNIT - 2: REAL AND COMPLEX NUMBERS
Classwork: Exercise: 2.1, Q: 1 (i, iii), Q: 2 (iii), Q: 3 (ii), Q: 4 (i), Q: 6 (ii), Exercise: 2.3, Q: 1 (i), Q: 2 (i), Q: 3 (ii), Exercise: 2.4, Q: 1 (i), Q: 3 (ii), Exercise: 2.5, Q: 1 (ii), Q: 2 (iii), Q: 3 (ii), Exercise: 2.6, Q: 1 (v), Q: 2 (iii), Q: 3 (i), Q: 4 (iii), Q: 6 (ii), Q: 7 (i)
Homework: Exercise: 2.1, Q: 1 (ii, iv-vi), Q: 2 (iv, vi), Q: 3 (iii, v), Q: 4 (ii, iv), Q: 6 (iii), Exercise: 2.3, Q: 1 (iii), Q: 2 (ii), Q: 3 (iii), Exercise: 2.4, Q: 1 (iv), Q: 3 (iii), Exercise: 2.5, Q: 1 (iv, vi), Q: 2 (v, vi), Q: 4, Exercise: 2.6, Q: 1 (vi), Q: 2 (iv), Q: 3 (iv), Q: 6 (vi), Q: 7 (ii), Review Exercise: 2, Q: 1, Q: 3 (ii, iv), Q: 4, Q: 5
UNIT -3: LOGARITHMS
Classwork: Exercise: 3.1, Q: 1 (iv), Q: 2 (ii), Exercise: 3.2, Q: 2 (iii), Q: 4 (ii), Q: 6 (i), Exercise: 3.3, Q: 1 (iii), Q: 3 (ii), Q: 4 (i), Q: 5 (iii), Exercise: 3.4, Q: 1 (i), Q: 4
Homework: Exercise: 3.1, Q: 1 (v), Q: 2 (iii), Exercise: 3.2, Q: 2 (iv), Q: 6 (iv, v), Exercise: 3.3, Q: 1 (v, vi), Q: 3 (iv), Q: 4 (ii), Q: 5 (iv), Exercise: 3.4, Q: 1 (iii, v, viii), Review Exercise: 3, Q: 1, Q: 3 (iii, iv), Q: 5 (ii), Q: 6 (i, iii)
UNIT- 4: ALGEBRAIC EXPRESSIONS AND ALGEBRAIC FORMULAS
Classwork: Exercise: 4.1, Q: 1 (iv), Q: 2 (i), Q: 3 (iii), Q: 4 (b), Q: 6 (v), Exercise: 4.2, Q: 3, 13, 14 (i), Exercise: 4.3, Q: 1 (iv), Q: 2 (v), Q: 3 (iv), Q: 4 (v), Exercise: 4.4, Q: 1 (i), Q: 2 (iii), Q: 3 (iii), Q: 5 (i),
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UNIT -5: FACTORIZATION
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Homework: Exercise: 5.1, Q: 1 (v, vi), Q: 3 (iv), Q: 4 (iv), Q: 5 (v, vi), Exercise: 5.2, Q: 1 (v), Q: 2 (iv), Q: 3 (iv), Q: 4 (v), Q: 5 (iv), Q: 6 (iv), Exercise: 5.3, Q: 1 (i, v), Q: 5, Exercise: 5.4, Q: 8, Review Exercise: 5, Q: 1, Q: 3 (ii, v, ix)
UNIT- 6: ALGEBRAIC MANIPULATION
Homework: Exercise: 6.1, Q: 2 (i, iv), Q: 3 (i), Q: 5 (iv), Q: 8, Exercise: 6.2, Q: 4, Q: 6, Exercise: 6.3, Q: 1 (i, ii, vi), Q: 2 (i, ii), Q: 4 (i), Review Exercise: 6, Q:1, Q: 6 (ii), Q: 7
UNIT -7: LINEAR EQUATIONS AND INEQUALITIES
Classwork: Exercise: 7.1, Q: 1 (i, ix), Q: 2 (v), Exercise: 7.2, Q: 2 (iii, viii), Exercise: 7.3, Q: 1 (ii), Q: 2 (iii)
Homework: Exercise: 7.1, Q: 1 (ii, v, vi, x), Q: 2 (i, ii, viii), Exercise: 7.2, Q: 2 (v, vii), Exercise: 7.3, Q: 1 (iv), Q: 2 (iv), Review Exercise: 7, Q: 1, Q: 3 (i, iii), Q: 5 (i)
UNIT-8: LINEAR GRAPH AND THEIR APPLICATION
Classwork: Exercise: 8.1, Q: 1, Q: 2 (ii), Q: 3 (i), Q: 4 (b), Q: 5 (ii),
Exercise: 8.2, Q: 3 (b), Q: 4 (iii), Exercise: 8.3, Q: 1
Homework: Exercise: 8.1, Q: 2 (iii, vii, viii), Q: 3 (v), Q: 4 (c), Q: 5 (v), Exercise: 8.2,
Q: 3 (e), Q: 4 (iv), Exercise: 8.3, Q: 4, Review Exercise: 8, Q: 1, Q: 4 (ii, v)

UNIT-9: INTRODUCTION TO COORDINATE GEOMETRY
Classwork: Exercise: 9.1, Q: 1 (a), Q: 2 (ii), Exercise: 9.2, Q: 1, Q: 3, Exercise: 9.3, Q: 1 (a), Q: 3
Homework: Exercise: 9.1, Q: 2 (ii), Exercise: 9.2, Q: 1, 10, Exercise: 9.3, Q: 1 (a), Q: 3

UNIT-10: CONGRUENT TRIANGLES
Classwork: Review Exercise: 10, Q: (3, 4)
Homework: Review Exercise: 10, Q: (2, 5)

UNIT-11: PARALLELOGRAMS AND TRIANGLES
Classwork: Review Exercise: 11, Q: (3, 4)
Homework: Review Exercise: 11, Q: (5, 6)

UNIT-12: LINE BISECTORS AND ANGLE BISECTORS
Classwork: Theorem 12.1.1, Theorem 12.1.4, Review Exercise: 12, Q: 4
Homework: Theorem 12.1.1, Theorem 12.1.4, Review Exercise: 12, Q: 5

UNIT-13: SIDES AND ANGLES OF A TRIANGLE
Classwork: Review Exercise: 13, Q: (3, 5)
Homework: Review Exercise: 13, Q: (2, 4)

UNIT-14: RATIO AND PROPORTION
Classwork: Review Exercise: 14, Q: (3, 5, 6)
Homework: Review Exercise: 14, Q: 2

UNIT-15: PYTHAGORAS’ THEOREM
Classwork: Exercise: 15, Q: 1 (i), Q: 3, Q: 6 (ii), Q: 7
Homework: Exercise: 15, Q: 1 (iv), Q: 8, Review Exercise: 15, Q: 2

UNIT-16: THEOREM RELATED WITH AREA
Classwork: Review Exercise: 16, Q: 2 (i, ii), Q: 3
Homework: Review Exercise: 16, Q: 2 (iii, iv)

UNIT-17: PRACTICAL GEOMETRY-TRIANGLES
Classwork: Exercise: 17.1, Q: 1 (iv), Q: 2 (ii), Q: 4 (ii), Q: 5 (i), Exercise: 17.2, Q: 1 (ii),
Q: 2 (iii), Q: 3 (i), Q: 4 (ii), Exercise: 17.3, Q: 1 (ii), Q: 3, Exercise: 17.5, Q: 1
Homework: Exercise: 17.1, Q: 1 (i, vi, vii), Q: 4 (iii), Q: 5 (ii), Exercise: 17.2, Q: 3 (ii),
Q: 4 (iii), Exercise: 17.3, Q: 1 (i), Exercise: 17.5, Q: 4, 6, Review Exercise: 17, Q: 2, Q: 3
UNIT-1: PERCENTAGE, RATIO AND PROPORTION
Classwork: Exercise: 1.1, Q: 1 (iii, xi), Q: 2 (iv, xii), Q: 3 (i), Q: 4 (xii), Exercise: 1.2, Q: 1, 9, Exercise: 1.3, Q: 1 (i), Q: 2 (i, ix), Exercise: 1.4, Q: 1, 9, Exercise: 1.5, Q: 1, 11
Homework: Exercise: 1.1, Q: 1 (v, ix, xii), Q: 2 (vi, ix, xi), Q: 3 (iii, iv, x, xi), Q: 4 (i, iii, v, xi), Exercise:1.2, Q: 3, 6, 7, Exercise: 1.3, Q: 1 (iv, vi), Q: 2 (ii, iii, viii), Exercise:1.4, Q: 3, 5, 6, Exercise: 1.5, Q: 2, 5, 6, 10, Review Exercise: 1, Q: 1, Q: 3, Q: 6
UNIT-2: ZAKAT, USHR AND INHERITANCE
Classwork: Exercise: 2.1, Q: 1, 7, 12
Homework: Exercise: 2.1, Q: 3, 6, 9, 10, Review Exercise: 2, Q: 1, Q: 3, Q: 5
UNIT-3: BUSINESS MATHEMATICS
Classwork: Exercise: 3.1, Q: 1 (iii), Q: 3 (ii), Q: 5, Exercise: 3.2, Q: 1 (ii), Q: 6, Exercise: 3.3: Q: 1, 5
Homework: Exercise: 3.1, Q: 1 (i, v), Q: 3 (iv, v), Q: 7, Exercise: 3.2, Q: 2 (iii), Q: 4, 8, Exercise: 3.3, Q: 3 Review Exercise: 3, Q: 1, Q: 3, Q: 4
UNIT-4: FINANCIAL MATHEMATICS
Homework: Exercise: 4.1, Q: 5, Exercise: 4.2, Q: 3, 6, 12, Exercise: 4.3, Q: 1, 6, 9, Exercise: 4.4, Q: 3, 8, Exercise: 4.5, Q: 2 (ii), Review Exercise: 4, Q: 1, Q: 3
UNIT-5:CONSUMER MATHEMATICS
Classwork: Exercise: 5.1, Q: 1, 6, Exercise: 5.2, Q: 1(i), Q: 2 (ii), Q: 3 (iii), Exercise: 5.3, Q: 6 (ii)
Homework: Exercise: 5.1, Q: 2, 8, Exercise: 5.2, Q: 1 (ii, vi), Q: 2 (iii), Q: 3 (v, vi), Exercise: 5.3, Q: 2,5, Review Exercise: 5, Q: 1, Q: 3, Q: 4
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UNIT-7: ARITHMETIC AND GEOMETRIC SEQUENCES
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UNIT-1: PERCENTAGE, RATIO AND PROPORTION
Classwork: Exercise: 1.1, Q: 1 (iii, xi), Q: 2 (iv, xii), Q: 3 (i), Q: 4 (xii), Exercise: 1.2, Q: 1, 9, Exercise: 1.3, Q: 1 (i), Q: 2 (i, ix), Exercise: 1.4, Q: 1, 9, Exercise: 1.5, Q: 1, 11
Homework: Exercise: 1.1, Q: 1 (v, ix, xii), Q: 2 (vi, ix, xi), Q: 3 (iii, iv, x, xi), Q: 4 (i, iii, v, xi), Exercise: 1.2, Q: 3, 6, 7, Exercise: 1.3, Q: 1 (iv, vi), Q: 2 (ii, iii, viii), Exercise: 1.4, Q: 3, 5, 6, Exercise: 1.5, Q: 2, 5, 6, 10, Review Exercise: 1, Q: 1, Q: 3, Q: 6

UNIT-2: ZAKAT, USHR AND INHERITANCE
Classwork: Exercise: 2.1, Q: 1, 7, 12
Homework: Exercise: 2.1, Q: 3, 6, 9, 10, Review Exercise: 2, Q: 1, Q: 3, Q: 5

UNIT-3: BUSINESS MATHEMATICS
Classwork: Exercise: 3.1, Q: 1 (iii), Q: 3 (ii), Q: 5, Exercise: 3.2, Q: 1 (ii), Q: 6, Exercise: 3.3, Q: 1, 5
Homework: Exercise: 3.1, Q: 1 (i, v), Q: 3 (iv, v), Q: 7, Exercise: 3.2, Q: 2 (iii), Q: 4, 8, Exercise: 3.3, Q: 3, Review Exercise: 3, Q: 1, Q: 3, Q: 4

UNIT-4: FINANCIAL MATHEMATICS
Homework: Exercise: 4.1, Q: 5, Exercise: 4.2, Q: 3, 6, 12, Exercise: 4.3, Q: 1, 6, 9, Exercise: 4.4, Q: 3, 8, Exercise: 4.5, Q: 2 (ii), Review Exercise: 4, Q: 1, Q: 3

UNIT-5: CONSUMER MATHEMATICS
Classwork: Exercise: 5.1, Q: 1, 6, Exercise: 5.2, Q: 1 (i), Q: 2 (ii), Q: 3 (ii), Exercise: 5.3, Q: 6 (ii)
Homework: Exercise: 5.1, Q: 2, 8, Exercise: 5.2, Q: 1 (ii, vi), Q: 2 (iii), Q: 3 (v, vi), Exercise: 5.3, Q: 2, 5, Review Exercise: 5, Q: 1, Q: 3, Q: 4

UNIT-6: EXPONENTS AND LOGARITHMS
Classwork: Exercise: 6.1, Q: 1 (ii), Q: 2 (iii), Q: 3 (iii), Q: 4 (iii, vii, xi), Q: 5 (viii, ix, xi), Exercise: 6.2, Q: 1 (ii), Q: 3, 15, 18, 27 (iii), Q: 28 (ii), Q: 29 (iii), Exercise: 6.3, Q: 8, 10, 15, Exercise: 6.4, Q: 1 (i), Q: 2 (ii), Q: 3 (ii), Q: 4 (iii), Exercise: 6.5, Q: 2 (ii), Q: 4 (ii), Q: 5 (ii), Q: 8 (i), Q: 10
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UNIT-7: ARITHMETIC AND GEOMETRIC SEQUENCES
Classwork: Exercise: 7.1, Q: 1 (iv), Q: 2 (ii), Q: 3 (v), Exercise: 7.2, Q: 1 (ii), Q: 2 (ii), Q: 5 (vii), Exercise: 7.3, Q: 1 (ii), Q: 5, Exercise: 7.4, Q: 3, 12, Exercise: 7.5, Q: 1 (iii), Q: 3 (ii), Q: 4
Homework: Exercise: 7.1, Q: 1 (i, viii, ix), Q: 2 (v, vi), Q: 3 (i, ii), Exercise: 7.2, Q: 1 (iii, v), Q: 2 (i, iv, vi), Q: 5 (ix), Exercise: 7.3, Q: 1 (iv), Q: 3, 7, 8, Exercise: 7.4, Q: 1, 4, 8, 10, Exercise: 7.5, Q: 2 (ii), Q: 12, Review Exercise: 7, Q: 1, Q: 3, Q: 5, Q: 7

UNIT-8: SETS AND FUNCTIONS
Classwork: Exercise: 8.1, Q: 5, Exercise: 8.2, Q: 4, 5
Homework: Exercise: 8.1, Q: 5, Exercise: 8.2, Q: 2, 7, Review Exercise: 8, Q: 1, Q: 4, Q: 5

UNIT-9: LINEAR GRAPH
Classwork: Exercise: 9.1, Q: 1 (i), Q: 3 (ii), Exercise: 9.2, Q: 2, Q: 11 (i), Exercise: 9.3, Q: 1 (a), Q: 3 (a)
Homework: Exercise: 9.1, Q: 1 (iv, vi, viii), Q: 3 (iii), Exercise: 9.2, Q: 1, 5, 9, Q: 12, Exercise: 9.3, Q: 1 (b), Q: 3 (b), Review Exercise: 9, Q: 1, Q: 3, Q: 4

UNIT-10: BASIC STATISTICS
Classwork: Exercise: 10.1, Q: 1, Exercise: 10.2, Q: 1 (i), Q: 3, Exercise: 10.3, Q: 1 (i), Exercise: 10.4, Q: 1 (i)
Homework: Exercise: 10.1, Q: 3, Exercise: 10.2, Q: 1 (iii), Exercise: 10.3, Q: 1 (iv), Exercise: 10.4, Q: 1 (iv, v), Review Exercise: 10, Q: 1, Q: 3, Q: 5

Duly Approved by the Competent Authority vide Letter No. SO(ER-II)1-9/2020 dated 24.08.2020
باب 1: پاکستان کی فلسفی اسات

نظریہ تعلیمی اساس ہے کہ مردم کی رہائش کی طرف بحث کی جاتی ہے۔ شاہراہ میں مسکن، متاح، خوراک، سلامتی، صحت، تعلیمی امتیاز، کسانیت تک پھیلا ہوا ہے۔ یہ تمام ہدایت کے تحت ہے۔

کلاس ورک: مشق سوالات، سوالات 1-2

باب 2: تحریک پاکستان اور پاکستان کا قیام

تحریک پاکستان کا بہت متاثر کن کام تھا۔ تحریک کے نتیجے میں پاکستان کا قیام ہوا۔ پاکستان کی تحریکی ہدایت ہے۔ تحریک کے نتیجے میں پاکستان کا قیام ہوا۔

کلاس ورک: مشق سوالات، سوالات 3-5
PHYSICS

CHAPTER 1: PHYSICAL QUANTITIES AND MEASUREMENT

Physical Quantities (Pg. 4), Base Quantities (Pg. 5), Derived Quantities (Pg. 5), International System of Units (Pg. 5), Base Units (Pg. 5, 6), Derived Units (Pg. 6), Prefixes (Pg. 7, 8), Scientific Notation (Pg. 8), Vernier Callipers (Pg. 10, 11), Significant Figures (Pg. 20-22), Example: 1.4 (Pg. 22)

Exercise:
Classwork: Q : 1.1 (iv, v, vii, x) (Pg. 24) (1.4-1.7, 1.13) (Pg. 25), Problems: (1.2, 1.6, 1.8) (Pg. 25, 26)
Homework: Q: 1.1 (i-iii) (Pg. 24) (1.2, 1.3, 1.8, 1.12) (Pg. 24, 25), Problems: (1.4, 1.5, 1.9) (Pg. 25, 26)

CHAPTER 2: KINEMATICS

Rest and Motion (Pg. 29), Scalars and Vectors (Pg. 33, 34), Terms Associated with Motion (Pg. 34-39), Graphical Analysis of Motion (Pg. 40), Distance-Time Graph (Pg. 40, 41), Speed-Time Graph (Pg. 42, 43), Equations of Motion (Pg. 44-46), Motion of Freely Falling Bodies (Pg. 49), Examples: 2.4-2.8, 2.10 (Pg. 39-43, 46, 47)
To measure the Specific Heat of Fusion of Ice.

To study the Relationship between Load and Extension (Helical Spring) by finding “g” by calculation.

To find the Weight of an unknown object by using Principle of Moments.

Homework: Q 9.1: (i, iii, v) (Pg. 207), (9.9) (Pg. 208), Problem: (9.1) (Pg. 208)

Q 9.1: (ii, vi, viii) (Pg. 207), (9.4, 9.6, 9.7) (Pg. 208), Problems: (9.2) (Pg. 208)

Classwork:

Exercise:

Example: 9.1 (Pg. 198, 199)

Force Table.

To determine the Resultant of two forces graphically using a Horizontal Block and Horizontal Surface.

Reaction to find the Co-efficient of Sliding Friction between a Wooden Block and Horizontal Surface.

Investigate the Relationship between Force of Limiting Friction and Normal Pressure.

To find the Value of “g” by Free Fall Method.

Diameter of a Solid Cylinder with Vernier Callipers.

To measure the Volume of a Solid Cylinder by measuring Length and Diameter with Vernier Callipers.

CHAPTER 7: PROPERTIES OF MATTER

Properties of Matter (Pg. 138), Density (Pg. 147), Pressure (Pg. 148, 149), Atmospheric Pressure only (Pg. 149), Pressure in Liquids (Pg. 151, 152), Pascal’s Law (Pg. 152), Application of Pascal’s Law, Hydraulic Press (Pg. 152, 153), Elasticity (Pg. 160, 161), Hooke’s Law (Pg. 161), Young’s Modulus (Pg. 162), Examples: 7.1, 7.2, 7.7 (Pg. 148, 153, 154, 162, 163)

CHAPTER 8: THERMAL PROPERTIES OF MATTER

Temperature and Heat (Pg. 169, 170), Specific Heat Capacity (Pg. 174, 175), Importance of Large Specific Heat Capacity of Water (Pg. 175), Heat Capacity Law, Hydraulic Press (Pg. 152, 153), Elasticity (Pg. 160, 161), Hooke’s Law (Pg. 161), Young’s Modulus (Pg. 162), Examples: 7.1, 7.2, 7.7 (Pg. 148, 153, 154, 162, 163)

CHAPTER 9: TRANSFER OF HEAT

Density (Pg. 147), Pressure (Pg. 148, 149), Atmospheric Pressure only (Pg. 149), Pressure in Liquids (Pg. 151, 152), Pascal’s Law (Pg. 152), Application of Pascal’s Law, Hydraulic Press (Pg. 152, 153), Elasticity (Pg. 160, 161), Hooke’s Law (Pg. 161), Young’s Modulus (Pg. 162), Examples: 7.1, 7.2, 7.7 (Pg. 148, 153, 154, 162, 163)

CHAPTER 6: WORK AND ENERGY

Energy (Pg. 121), Kinetic Energy (K.E.=1/2 mv^2) (Pg. 121, 122), Potential Energy (P.E.=mgh) (Pg. 123, 124), Efficiency (Pg. 136), Power (Pg. 137), Examples: 6.2, 6.3, 6.5, 6.7 (Pg. 122-124, 136-139)
Exercise:

Classwork: Q: 6.1 (iii, xi) (Pg. 140, 141), (6.5, 6.6, 6.13, 6.14) (Pg. 141), Problems: (6.4-6.6) (Pg. 142)

Homework: Q: 6.1 (v, ix) (Pg. 140, 141), (6.7, 6.15, 6.16) (Pg. 141), Problems: (6.2, 6.3, 6.9) (Pg. 142)

CHAPTER 7: PROPERTIES OF MATTER
Density (Pg. 147), Pressure (Pg. 148, 149), Atmospheric Pressure only (Pg. 149), Pressure in Liquids (Pg. 151, 152), Pascal's Law (Pg. 152), Application of Pascal’s Law, Hydraulic Press (Pg. 152, 153), Elasticity (Pg. 160, 161), Hooke’s Law (Pg. 161), Young’s Modulus (Pg. 162), Examples: 7.1, 7.2, 7.7 (Pg. 148, 153, 154, 162, 163)

Exercise: Q: 7.1: (i, vii, viii) (Pg. 164), (7.6, 7.15, 7.17) (Pg. 165), Problems: (7.1, 7.5, 7.11) (Pg. 165, 166)

CHAPTER 8: THERMAL PROPERTIES OF MATTER
Temperature and Heat (Pg. 169, 170), Specific Heat Capacity (Pg. 174, 175), Importance of Large Specific Heat Capacity of Water (Pg. 175), Heat Capacity (Pg. 176), Change of State (Pg. 177), Latent Heat of Fusion (Pg. 178, 179), Latent Heat of Vaporization (Pg. 180-182), The Evaporation (Pg. 182,183), Thermal Expansion (Pg. 183, 184), Linear Thermal Expansion in Solids (Pg. 184), Volume Thermal Expansion (Pg. 185, 186), Examples: 8.5-8.7 (Pg. 175, 176, 184-187)

Exercise: Q 8.1: (vi, vii) (Pg. 191), (8.7-8.9) (Pg. 191) Problems: (8.4, 8.9) (Pg. 192)

CHAPTER 9: TRANSFER OF HEAT
Transfer of Heat (Pg. 195), Conduction (Pg. 195, 196), Thermal Conductivity (Pg. 196, 197), Convection (Pg. 199), Convection Currents in Air (Pg. 200), Use of Convection Currents (Pg. 200), Land and Sea Breezes only (Pg. 200, 201), Radiation (Pg. 201, 202), Example: 9.1 (Pg 198, 199)

Exercise: Q 9.1: (ii, vi, viii) (Pg. 207), (9.4, 9.6, 9.7) (Pg. 208) Problems: (9.2) (Pg. 208)

EXPERIMENTS:
1. To measure the Volume of a Solid Cylinder by measuring Length and Diameter of a Solid Cylinder with Vernier Callipers.
2. To find the Value of “g” by Free Fall Method.
3. Investigate the Relationship between Force of Limiting Friction and Normal Reaction to find the Co-efficient of Sliding Friction between a Wooden Block and Horizontal Surface.
4. To determine the Resultant of two forces graphically using a Horizontal Force Table.
To find the Weight of an unknown object by using Principle of Moments.

6. To study the Effect of the Length of Simple Pendulum on Time and hence find “g” by calculation.

7. To study the Relationship between Load and Extension (Helical Spring) by drawing a graph.

8. To find the Specific Heat by the method of mixture using Polystyrene Cups (used as container of negligible Heat Capacity).

9. To measure the Specific Heat of Fusion of Ice.

(Note: All questions given in “Test Yourself” are excluded.)

CHAPTER NO. 1: FUNDAMENTALS OF CHEMISTRY

Basic Definitions (matter, substance, homogeneous and heterogeneous mixture, physical and chemical properties), Elements, Compound and Mixture, Difference between a compound and a mixture, Atomic Number and Mass Number, Example 1.1, Relative Atomic Mass and Relative Mass Unit, Empirical formula and Molecular formula, Molecular mass and Formula mass, Examples 1.2, 1.3 (Pg. 2-14), Types of Molecules, Avogadro’s Number, Mole and Molar mass, Example 1.4, Chemical Calculations, Mole-Mass Calculations, Example 1.5, Mole-Particle Calculations, Examples: 1.6, 1.7 (Pg. 16-22)

Practicals:
1. Separate the given mixture of iron filings and sand by physical method.

Questions:
Classwork: Multiple Choice Questions (6-13) (Pg. 24-25)
Homework: Short Answer Questions (4-8, 10-12, 14-17, 19) (Pg. 25-26);
Long Answer Questions (1, 2, 4) (Pg. 26); Numericals (1, 3, 4, 6, 7, 9) (Pg. 26)

CHAPTER 2: STRUCTURE OF ATOMS

Rutherford’s Atomic Model, Defects in Rutherford’s Model, Bohr’s Atomic Theory, Electronic Configuration, Examples: 2.1, 2.2, 2.3, Electronic Configuration of First 18 Elements (Pg. 31-37)

Practicals:
No Practical

Questions:
Classwork: Multiple Choice Questions (3, 4, 7, 8) (Pg. 42)
Homework: Short Answer Questions (3-8, 12, 13); (Pg. 42-43);
Long Answer Questions (4-8) (Pg. 43)

CHAPTER 3: PERIODIC TABLE AND PERIODICITY OF PROPERTIES

Periodic Law, Modern Periodic Table, Long Form of Periodic Table, Salient Features of Long Form of Periodic Table, Periods, Groups, Periodicity of Properties, Atomic Size and Atomic Radius, Shielding Effect, Ionization Energy, Electron Affinity, Electronegativity (Pg. 46-56)
LONG ANSWER QUESTIONS

Home Work:

Class Work:

Questions:

1. Demonstrate that Some Chemical Processes Absorb Energy.

Practicals:

(Reaction with hydrogen, water, methane and NaOH) (Pg. 144-148)

PLATINUM), NON-METALS, PHYSICAL AND CHEMICAL PROPERTIES OF NON-METALS, IONIZATION ENERGY (Pg. 138-141), INERTNESS OF NOBLE METALS (SILVER, GOLD AND METALS, ELECTROPOTENTIALITY, TRENDS OF ELECTROPOTENTIALITY, ELECTROPOTENTIALITY AND

CHAPTER 8: CHEMICAL REACTIVITY

Home Work:

Short Answer Questions (8-9, 18-22) (Pg. 136);

Multiple Choice Questions (5, 6, 8-10) (Pg. 135)

Class Work:

No Practical

Practicals:

ELECTROPLATING (ELECTROPLATING OF SILVER AND CHROMIUM) (Pg. 128-131)

CORROSION AND ITS PREVENTION, RUSTING REACTIONS, ELECTROCHEMICAL CELLS, CONCEPT OF ELECTROLYTES (WEAK AND STRONG EXAMPLES: 7.1, 7.2, 7.3, OXIDIZING AND REDUCING AGENTS, OXIDATION-REDUCTION GAIN OF ELECTRONS, OXIDATION STATE AND RULES FOR ASSIGNING OXIDATION STATE, OXIDATION AND REDUCTION REACTIONS, OXIDATION AND REDUCTION IN TERMS OF LOSS OR

CHAPTER 7: ELECTROCHEMISTRY

Home Work:

Short Answer Question (12) (Pg. 111); Long Answer Questions (1-4)

Class Work:

Multiple Choice Questions (4, 11-13) (Pg. 110-111)

Questions:

Short Answer Questions (6-12) (Pg. 151);

Multiple Choice Questions (1-3, 7-11) (Pg. 150-151)

CHAPTER 6: SOLUTIONS

Home Work:

Short Answer Questions (4, 7) (Pg. 94); Long Answer Questions (1-3) (Pg. 94); Numericals (2-5, 7-9) (Pg. 94-95)

Classwork:

Multiple Choice Questions (5-8, 11-13, 17) (Pg. 72-73)

Questions:

Short Answer Questions (4, 7, 8, 10-14) (Pg. 73-74);

Long Answer Questions (1, 4-8) (Pg. 74)

CHAPTER 5: PHYSICAL STATES OF MATTER

Home Work:

Short Answer Questions (3, 4, 7-9) (Pg. 57);

Multiple Choice Questions (6-13) (Pg. 56-57)

Questions:

No Practical

Practicals:

No Practical

Questions:

Practicals:

No Practical

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Questions:
CHAPTER 1: INTRODUCTION TO BIOLOGY
Introduction to Biology, Divisions and Branches of Biology (Pg. 2-3), Quran and Biology (Pg. 6-7), The Levels of Organization (Pg. 7-13)

Practicals:
1. Study of external morphology of mustard plant and microscopic examination of root, stem, leaf, flower, fruit and seeds
2. Identification of major organs and organ systems in a dissected frog (Dissection by demonstrator / teacher)

Questions:
Classwork: Multiple Choice Questions (Pg. 1-10) (Pg. 17)

CHAPTER 7: ELECTROCHEMISTRY
Oxidation and Reduction Reactions, Oxidation and Reduction in terms of Loss or Gain of Electrons, Oxidation State and Rules for Assigning Oxidation State, Examples: 7.1, 7.2, 7.3, Oxidizing and Reducing Agents, Oxidation-Reduction Reactions, Electrochemical Cells, Concept of Electrolytes (Weak and Strong Electrolytes), Non-electrolyte (Pg. 114-121) Corrosion and its Prevention, Rusting of Iron, Prevention of Corrosion, Prevention of Corrosion by Physical Methods, Electroplating (Electroplating of Silver and Chromium) (Pg. 128-131)

Practicals:
No Practical

Questions:
Class Work: Multiple Choice Questions (5, 6, 8-10) (Pg. 135)
Home Work: Short Answer Questions (8-9, 18-22) (Pg. 136);
Long Answer Questions (1, 2, 7, 9, 10) (Pg. 137)

CHAPTER 8: CHEMICAL REACTIVITY
Metals, Electropositive Character, Trends of Electropositivity, Electropositivity and Ionization Energy (Pg. 138-141), Inertness of Noble Metals (Silver, Gold and Platinum), Non-Metals, Physical and Chemical Properties of Non-Metals, Comparison of Reactivity of the Halogens, Important Reactions of Halogens (Reaction with hydrogen, water, methane and NaOH) (Pg. 144-148)

Practicals:
1. Demonstrate that Some Chemical Processes Absorb Energy.

Questions:
Class Work: Multiple Choice Questions (1-3, 7-11) (Pg.150-151)
Home Work: Short Answer Questions (6-12) (Pg.151);
Long Answer Questions (2, 3, 5, 7-9, 11) (Pg. 151)
CHAPTER 2: SOLVING THE BIOLOGICAL PROBLEM
Biological Method, Biological Problem, Hypothesis, Deductions and Experiments, (Pg. 20-23) Theory, Law and Principle, Data Organization and Data Analysis (Pg. 26-28)

**Practicals:**
No Practical

**Questions:**

**Classwork:** Multiple Choice Questions (1-9) (Pg. 29-30)

**Homework:** Understanding the Concepts (Q: 3), Short Questions (1, 2) (Pg. 30)

CHAPTER 3: BIODIVERSITY
Biodiversity, Importance of Biodiversity, Classification, Aims of Classification, Basis of Classification, Taxonomic Hierarchy, Species-Basic Unit of Classification (Pg. 31-35), Five Kingdom Classification System, The Five Kingdoms, Binomial Nomenclature (Pg. 37-40)

**Practicals:**
No Practical

**Questions:**

**Classwork:** Multiple Choice Questions (1-11) (Pg. 48-49)

**Homework:** Understanding the Concepts (Qs: 1-5), Short Questions (1-3, 5) (Pg. 49)

CHAPTER 4: CELL BIOLOGY
Cellular Structures and Functions, Cell Wall, Cell Membrane, Cytoplasm, Cell Organelles, Nucleus, Ribosomes, Mitochondria, Plastids, Endoplasmic Reticulum, Golgi Apparatus, Lysosomes, Centrioles, Vacuoles, Difference between Prokaryotic and Eukaryotic Cells (Pg. 57-66), Passage of Molecules Into and Out of Cells, Diffusion, Facilitated Diffusion, Osmosis, Filtration, Active Transport, Endocytosis, Exocytosis (Pg. 69-74)

**Practicals:**
1. Identify from fresh preparations, the cell membrane, nucleus and cytoplasm in an animal cell and the cell wall, cell membrane, sap vacuole, cytoplasm, nucleus and chloroplasts in a plant cell

**Questions:**

**Classwork:** Multiple Choice Questions (1, 3-15) (Pg. 83-84)

**Homework:** Understanding the Concepts (Qs: 1-5, 6, 7), Short Questions (2-3) (Pg. 84)

CHAPTER 5: CELL CYCLE
Cell Cycle, Mitosis, Phases of Mitosis, Significance of Mitosis (Pg. 87-93), Meiosis, Phases of Meiosis, Significance of Meiosis (Pg. 95-100), Comparison between Mitosis and Meiosis (Pg. 101)

**Practicals:**
1. Observation of various stages of mitosis and meiosis by slides, model and charts

**Questions:**

**Classwork:** Multiple Choice Questions (1-15) (Pg. 104-105)

**Homework:** Understanding the Concepts (Qs: 1-8), Short Questions (1-4) (Pg. 105)
CHAPTER 6: ENZYMES
Enzymes, Characteristics of Enzymes (Pg. 107-109), Mechanism of Enzyme Action (Pg. 111-112)

Practicals:
1. Experiment to show working of enzyme in vitro e.g. Pepsin working on meat in test tube

Questions:
Classwork: Multiple Choice Questions (1-4) (Pg. 115)

Homework: Understanding the Concepts (Qs: 1, 2, 7), Short Question (1) (Pg. 116)

CHAPTER 7: BIOENERGETICS
Oxidation-Reduction Reactions, ATP - The Cell’s Energy Currency, Photosynthesis, Mechanism of Photosynthesis, Light Reactions, Dark Reactions (Pg. 118-122), Respiration, Aerobic and Anaerobic Respiration (Excluding importance of fermentation) (Pg. 130-131), Tables: 7.1, 7.2 (Pg. 135, 136)

Practicals:
1. Demonstration of the process of photosynthesis using an aquatic plant, like Hydrilla
2. Investigation of the release of carbon dioxide and heat during Aerobic Respiration in germinating seeds

Questions:
Classwork: Multiple Choice Questions (3, 4, 9) (Pg. 137)

Homework: Understanding the Concepts (Qs: 4, 5, 7, 8), Short Questions (1-4) (Pg. 137-138)

CHAPTER 8: NUTRITION
Components of Human Food, Carbohydrates, Lipids, Proteins, Minerals (Excluding Role of Calcium and Iron), Table 8.2 (Pg. 143-144), Vitamins (Table 8.3: Functions, deficiencies and sources of important Vitamins - Table only) (Pg. 146), Effects of Water and Dietary Fiber, Digestion in Humans, Human Alimentary Canal, Role of Liver (Pg. 157-164)

Practicals:
1. Microscopic examination of a transverse section of the small intestine to show the villi

Questions:
Classwork: Multiple Choice Questions (1, 2, 4, 5, 7, 11, 13, 15) (Pg. 167-168)

Homework: Understanding the Concepts (Qs: 3, 4, 6, 10-11), Short Questions (1, 3, 5) (Pg.168-169)

CHAPTER 9: TRANSPORT
Transport in Plants, Water and Ion Uptake, Transpiration, Opening and Closing of Stomata (Pg. 171-174), Significance of Transpiration (Pg. 176), Transport of Water, Transport of Food , Transport in Human, Blood, Blood Plasma, Blood Cells, (Pg. 181-187), Human Heart, Pulmonary and systemic circulation, Heart Beat, Heart Rate and Pulse Rate (Pg. 192-196), Blood Vessels (Excluding arteries, veins and capillaries – keeping only Table 9.1 of Comparison of arteries, capillaries and veins) (Pg. 199), Cardiovascular Disorders, Atherosclerosis and Arteriosclerosis, Myocardial Infarction (Pg. 202-204)
UNIT 1: PROBLEM SOLVING
Problem Solving Steps (Pg. 2-6), Flowcharts (Pg. 6-8), Examples of Flowcharts (1, 4, 6, 7, 8, 11) (Pg. 8-15), Algorithm (Pg.15), Definition (Pg. 15-16), Formulation of an Algorithm (Pg. 17), Examples of Algorithms (1, 2, 5, 7, 9), Efficiency of Algorithms (Pg. 21-23), Identification of Errors(Pg. 27-29)
Classwork: Q: 1.1 (1-4)(Pg. 30), Q: 1.2 (Pg. 30-31), Q. 1.3 (Pg. 31), Q. 1.4 (1, 3, 5) (Pg. 31)
Homework: Q: 1.1 (5) (Pg. 30), Q. 1.4 (2,4) (Pg. 31)

UNIT 2: BINARY SYSTEM
Introduction to Number Systems (Pg. 34), Number System Conversion (Decimal to Binary and Binary to Decimal, Hexadecimal to Binary and Binary to Hexadecimal) (Pg. 35-39), Memory and Data Storage (39-40), Measurement of Size of Computer Memory(Pg. 43), Boolean Algebra (Boolean Preposition, Truth Values, Logical Operators (AND, OR, NOT), Truth Table (Pg. 44-47), Logical Expressions (Pg. 49-50)
Classwork: Q: 2.1 (Pg. 51), Q. 2.2 (2, 3, 5) (Pg. 51-52), Q. 2.3, Q. 2.4 (Pg. 52)
Homework: Q: 2.2 (4) (Pg. 51), Activity 2.8 (Pg. 52)

UNIT 3: NETWORKS
Computer Networks (Pg. 54-56), Basics of Data Communication (Pg. 60-62), Computer Network Models (Pg. 62-64), Protocols in TCP/IP Suit (Pg. 64-65), Understanding IP Addressing (Pg. 67-68), Routing (Pg. 68-69)
Classwork: Q: 3.1 (Pg. 71), Q. 3.2 (Pg. 71-72), Q. 3.3 (1-3) (Pg. 72), Q. 3.4 (4) (Pg. 72)
Homework: Q: 3.3 (4-7), Q. 3.4 (2) (Pg. 72)

UNIT 4: DATA AND PRIVACY
Introduction (Pg. 74) Ethical Issues Related to Security (Pg.74-78), Simple Encryption (Pg. 81-85), Encryption with Keys and Passwords (Pg. 89-90), Cybercrime (Pg. 90-91)
Classwork: Q: 4.1 (Pg. 96), Q. 4.2, Q. 4.3(1, 5) (Pg. 96)
Homework: Q: 4.3 (2,4) (Pg. 97), Activity 4.8 (Pg. 97)

UNIT 5: DESIGNING WEBSITE
Introduction to HTML (Pg. 100-103), Text Formatting (Pg. 103,104), Define a Hyperlink to a Webpage (Pg. 109,110)
Classwork: Q: 5.1, 5.2 (Pg. 113-114), Q. 5.3 (1,3) (Pg. 115), Q. 5.4 (Pg. 115)
Homework: Q: 5.3 (2) (Pg. 115), Q. 5.5 (Pg. 116) Activity 5.7 (Pg. 116)
List of Practicals:
1. Draw a flowchart that calculates the sum and product of two numbers.
2. Draw a flowchart that calculates the difference and division of two numbers.
3. Draw a flowchart that calculates the modulus of an integer with respect to another integer.
4. Draw a flowchart that calculates the area of a rectangle.
5. Draw a flowchart that calculates the area of a triangle when three side are given.
6. Draw a flowchart that calculates the volume of a cylinder.
7. Draw a flowchart that calculates the temperature from Centigrade to Fahrenheit.
8. Write a program to print the distance covered by a car having an average speed.
9. Draw a flowchart that takes a number as input and displays whether it is even or odd.
10. Draw a flowchart that takes three integers as input and displays the largest two.
11. Draw a flowchart that prints the grade of a student.
12. Draw a flowchart that prints first 10 integers using loop.
13. Draw a flowchart that prints odd numbers from 1 to 10.
14. Draw a flowchart that takes a number as an input and prints its multiplication table up to 10.
15. Draw a flowchart that takes two numbers as input and prints the multiplication table of the first number up to the second number.
16. Draw a flowchart that prints integers from 10 to 1 (reverse order using loop).
17. Draw a flowchart that takes input “n” from the user and prints the sum of first “n” numbers and their average.
18. Draw a flowchart that takes few numbers as input from the user and prints them in reverse order.
19. Draw a flowchart that takes 10 numbers as input from the user and prints all the odd ones.
20. Draw a flowchart that takes two numbers “m” and “n” as input from the user and calculates “m” to the power on “n”.
21. Draw a flowchart that takes two numbers as input and calculates the GCD of the numbers using Euclidean Algorithm.
22. Creating a HTML page which has following tags:
    - html
    - body
23. Create an HTML page which has following additional tags:
    - title
    - paragraph
    - line break
24. Create an HTM page which has following additional functions heading up to three levels:
    - bold,
    - italic,
    - underline
25. Create a website with two webpages linked to each other. The links are in text.
26. Create an HTML page which has a table and the border of the table is of a
CHAPTER 1: INTRODUCTION AND ROLE OF SCIENCE
Introduction, Concept of Science in Islam, Contribution of Muslim and Pakistani Scientists, Branches of Science (from Physics to Geography) (Pg. 1-8), Role of Science and Technology in our Life (Pg. 9)
Classwork: Exercise Question No. 5, 11, 12 (Pg. 13)
Homework: Exercise Question No. 1-4, 6, 10 (Pg. 11, 13)

CHAPTER 2: OUR LIFE AND CHEMISTRY
The basic building elements for life, Carbon and its importance, Organic chemistry, Water, Air (Pg. 14-23)
Classwork: Exercise Question No. 4-6 (Pg. 28)
Homework: Exercise Question No. 1 (i-v, vii), 2 (i-iv), 3 (i) (Pg. 27, 28)

CHAPTER 3: BIOCHEMISTRY AND BIOTECHNOLOGY
Introduction, Metabolism, Enzymes, Blood and its Functions (Pg. 29-32), Antibiotics and Vaccines (Pg. 35, 36)
Classwork: Exercise Question No. 5-8, 11 (Pg. 39)
Homework: Exercise Question No. 1, 2, 3 (i,iii, iv, v), 4 (i, ii, iv) (Pg. 38, 39)

CHAPTER 4: HUMAN HEALTH
Introduction, Food and its Major Components, Food and Energy, Balanced Diet (Pg. 40-45), Exercise and Health, First Aid (Pg. 47-49)
Classwork: Exercise Question No. 5-9 (Pg. 51)
Homework: Exercise Question No. 1 (i-iv), 2 (i-iv), 3 (i-iii), 4 (i-iv) (Pg. 50, 51)

CHAPTER 5: DISEASES - CAUSE AND PREVENTION
Introduction, Diseases Caused by Germs, Agents Spreading the Germs, Protection from Germs (Pg. 52-65)
Classwork: Exercise Question No. 4-6 (Pg. 70)
Homework: Exercise Question No. 1 (i-vi), 2 (i-iv), 3 (i-v) (Pg. 69, 70)

CHAPTER 6: ENVIRONMENT AND NATURAL RESOURCES
Earth’s Atmosphere, Environmental Pollution (Pg. 71-79) Dairy and Poultry Farming, Wildlife and National Parks (Pg. 83-85)
Classwork: Exercise Question No. 4-8, 11 (b, c, d) (Pg. 90)
Homework: Exercise Question No. 1 (i-v, vii, ix), 2 (i-iv), 3 (i-iii, v) (Pg. 88, 89)
دربی کتاب کے سپارش
کلاح ورک: سوال نمبرا 1، 5، 8، 9، 10، انہم جزل، تنم، اورแมزون شو قوس

1. ہند (لیم):
کلاح ورک: سوال نمبرا 1، 3، 4، 8، 10

2. نصت (لینم):
کلاح ورک: سوال نمبرا 1، 3، 5، 8، 9

3. نظریہ پاکستان:
کلاح ورک: سوال نمبرا 1، 3، 4، 5، 6

4. کئی مہ ہے دستوں سے ہیاک: کلاح ورک: سوال نمبرا 1، 5، 8، 9، 10

Duly Approved by the Competent Authority vide Letter No. SO(ER-II)1-9/2020 dated 24.08.2020
UNIT # 1: HAZRAT MUHAMMAD ﷺ AN EMBODIMENT OF JUSTICE
Classwork: Glossary, Vocabulary (B, C & D), Reading Comprehension (B & C), Grammar (A, C & D), Writing Skills (B)
Homework: Vocabulary (A), Reading Comprehension (A), Grammar (B & E)

UNIT # 3: TRY AGAIN (POEM)
Classwork: Vocabulary (B), Reading Comprehension (A Qs: 1-6, B & C), Grammar (B, D & F), Writing Skills (B, C & D)
Homework: Vocabulary (A), Reading Comprehension (D), Grammar (A, C & E), Writing Skills (A)

UNIT # 4: FIRST AID
Classwork: Glossary, Vocabulary (A & C), Reading Comprehension (B), Grammar
UNIT # 1: HAZRAT MUHAMMAD
Classwork: Glossary, Vocabulary (B, C & D), Reading Comprehension (B & C), Grammar (A, C & D), Writing Skills (B)
Homework: Vocabulary (A), Reading Comprehension (A), Grammar (A & D)

UNIT # 3: TRY AGAIN (POEM)
Classwork: Vocabulary (B), Reading Comprehension (A Qs: 1-6, B & C), Grammar (B, D & F), Writing Skills (B, C & D)
Homework: Vocabulary (A), Reading Comprehension (D), Grammar (A, C & E), Writing Skills (A)

UNIT # 4: FIRST AID
Classwork: Glossary, Vocabulary (A & C), Reading Comprehension (B), Grammar (B, C, D & E), Writing Skills (B)
Homework: Vocabulary (B), Reading Comprehension (A), Grammar (A)

UNIT # 6: TELEVISION VS. NEWSPAPERS
Classwork: Glossary, Vocabulary (B), Reading Comprehension (C), Grammar (B & C), Writing Skills (B)
Homework: Vocabulary (A), Reading Comprehension (A), Grammar (A & D)

UNIT # 8: PEACE (POEM)
Classwork: Vocabulary (C, D & E), Reading Comprehension (A & B), Grammar (B & C), Writing Skills (C & D)
Homework: Vocabulary (A & B), Grammar (A), Writing Skills (A)

UNIT # 10: A WORLD WITHOUT BOOKS
Classwork: Glossary, Vocabulary (A), Reading Comprehension (A & B), Grammar (A, C & D),
Homework: Vocabulary (B), Grammar (B & E)

UNIT # 13: FAITHFULNESS
Classwork: Glossary, Vocabulary (A, B & C), Reading Comprehension (Qs: 1-6), Grammar (A, C, D & E)
Homework: Vocabulary (D), Grammar (B & F)

WRITING AN ESSAY
Homework: A Hockey Match, A True Muslim, Quaid-e-Azam Muhammad Ali Jinnah

TRANSLATION OF (URDU) PARAGRAPHS INTO ENGLISH
Classwork: (2), (6), (7), (8), (9), (10), (13), (16), (19), (23)
Homework: (24), (25), (28), (29), (31), (32), (33), (34), (37) (38)

DIRECT AND INDIRECT SPEECH
Classwork: (Pages 172-177)
Homework: Practice will be given.

PAIR OF WORDS
Classwork: 1, 2, 3, 6, 8, 9, 10, 12, 13, 15, 17, 19, 20, 22, 24, 27, 28, 30, 32 & 34
Homework: 36, 38, 39, 43, 45, 49, 51, 52, 54, 56, 58, 62, 63, 65, 66, 71, 72, 75 & 78

Duly Approved by the Competent Authority vide Letter No. SO(ER-II)1-9/2020 dated 24.08.2020
UNIT - 1: QUADRATIC EQUATIONS
Classwork: Exercise: 1.1, Q: 1 (iii), Q: 2 (ii), Q: 3 (v, ix), Exercise: 1.2, Q: 1 (iii), Exercise: 1.3, Q: 10, 12, Exercise: 1.4, Q: 1, 9
Homework: Exercise: 1.1, Q: 1 (i, iv), Q: 2 (iv, v), Q: 3 (i, v), Exercise:1.2, Q: 1 (i, vii, viii), Exercise: 1.3, Q: 2, 7, 9, 10, 14, Exercise: 1.4, Q: 3, 8, Miscellaneous Exercise: 1, Q: 1, Q: 2

UNIT - 2: THEORY OF QUADRATIC EQUATIONS
Classwork: Exercise: 2.1, Q: 1 (ii), Q: 2 (i), Q: 3, Exercise: 2.2, Q: 2 (vi), Q: 4, Exercise: 2.3, Q: 1 (i), Q: 2 (ii), Q: 5 (ii), Exercise: 2.5, Q: 1 (f), Q: 2 (b), Q: 3 (b), Exercise: 2.6, Q: 1, 2, 5, Exercise: 2.8, Q: 1, Q: 2, Q: 4, 10
Homework: Exercise: 2.1, Q: 1 (iv), Q: 2 (iv), Q: 4 (iii), Q: 10, Exercise: 2.2, Q: 2 (ii, viii), Exercise: 2.3, Q: 1 (v, vi), Q: 6 (i), Exercise: 2.5, Q: 1 (g, h), Q: 2 (d, e), Exercise: 2.7, Q: 2, 5, 10, 13, Exercise: 2.8, Q: 1, 5, 9, Miscellaneous Exercise: 2, Q: 1, Q: 2 (i-vii)

UNIT - 3: VARIATIONS
Classwork: Exercise: 3.1, Q: 4, 9, Q: 11 (iv), Exercise: 3.2, Q: 1 (iii), Q: 8, 11, Exercise: 3.3, Q: 1 (i), Q: 2 (iv, vi), Q: 3 (i), Q: 4 (iii), Exercise: 3.4, Q: 1 (i), Q: 2 (iv, vii), Exercise: 3.5, Q: 1, Exercise: 3.6, Q: 1 (iii), Q: 2 (ii), Exercise: 3.7, Q: 2
Homework: Exercise: 3.1, Q: 1 (iv, v), Q: 5, 7, Q: 11 (v), Exercise: 3.2, Q: 2 (ii), Q: 5, 10, 13, Exercise: 3.3, Q: 1 (iv, vi), Q: 2 (ii, v), Q: 3 (iv), Q: 4(ii), Exercise: 3.4, Q: 1 (v, viii), Q: 2 (ii, v), Exercise: 3.5, Q: 3, 5, Exercise: 3.6, Q: 1 (ii, vi), Exercise: 3.7, Q: 3, 9, Miscellaneous Exercise: 3, Q: 1, Q: 2

UNIT - 4: PARTIAL FRACTIONS
Classwork: Exercise: 4.1, Q: 8, Exercise: 4.2, Q: 2, Exercise: 4.3, Q: 8, Exercise: 4.4, Q: 2
Homework: Exercise: 4.1, Q: 8, Exercise: 4.2, Q: 2, 4, 7, Exercise: 4.2, Q: 1, 6, 8, Exercise: 4.3, Q: 1, 6, Exercise: 4.4, Q: 3, 6, Miscellaneous Exercise: 4, Q: 1, Q: 2 (i-v)

UNIT - 5: SETS AND FUNCTIONS
Classwork: Exercise: 5.1, Q: 1 (i), Q: 3 (i, vi), Q: 4 (i), Q: 6 (i), Exercise: 5.2, Q: 1 (v), Q: 2 (iv), Exercise: 5.3, Q: 1 (i), Q: 2 (iii), Q: 4 (iii), Exercise: 5.4, Q: 3 (iii), Exercise: 5.5, Q: 3 (i), Q: 5 (ii)
Homework: Exercise: 5.1, Q: 1 (ii, iii, iv), Q: 3 (ii, iii, iv, v), Q: 4 (iii), Q: 6 (ii), Exercise: 5.2, Q: 1 (vi-viii), Q: 3, Q: 4 (ii), Exercise: 5.3, Q: 1 (iii, v), Q: 2 (ii), Q: 4 (v), Exercise: 5.4, Q: 5 (ii), Exercise: 5.5, Q: 3 (ii, iii), Q: 5 (iii), Miscellaneous Exercise: 5, Q: 1, Q: 2

UNIT - 6: BASIC STATISTICS
Homework: Exercise: 6.1, Q: 3, Exercise: 6.2, Q: 11, 12, Exercise: 6.3, Q: 4, Q: 7, Miscellaneous Exercise: 6, Q: 1, Q: 2

UNIT - 7: INTRODUCTION TO TRIGONOMETRY
Classwork: Exercise: 7.1, Q: 1 (vii), Q: 2 (ii), Q: 3 (v), Q: 4 (viii), Q: 5 (iii), Exercise: 7.2,
UNIT - 3: ALGEBRAIC MANIPULATION
Classwork: Exercise: 3.1, Q: 1, 11, 15, Exercise: 3.2, Q: 1, 10, Exercise: 3.3, Q: 1, 9, 15, Exercise: 3.4, Q: 1, 8, 17, Exercise: 3.5, Q: 2, 12, Exercise: 3.6, Q: 4, 5, 9
Homework: Exercise: 3.1, Q: 2, 5, 7, 12, Exercise: 3.2, Q: 3, 6, 9, Exercise: 3.3, Q: 3, 7, 12, 14, Exercise: 3.4, Q: 3, 7, 9, 12, 15, Exercise: 3.5, Q: 1, 6, 7, 11, Exercise: 3.6, Q: 1, 8, 12, Review Exercise: 3, Q: 1

UNIT - 4: LINEAR EQUATIONS AND INEQUALITIES
Classwork: Exercise: 4.1, Q: 1 (ii), Q: 3, 10, 18, Exercise: 4.2, Q: 3, 12, 16
Homework: Exercise: 4.1, Q: 1 (iii), Q: 5, 8, 16, 20, Exercise: 4.2, Q: 6, 9, 15, Review Exercise: 4, Q: 1

UNIT - 5: QUADRATIC EQUATIONS
Classwork: Exercise: 5.1, Q: 1, 8, 15, 19, 25, Exercise: 5.2, Q: 3, 12, Exercise: 5.3, Q: 2
Homework: Exercise: 5.1, Q: 2, 9, 12, 13, 14, 18, 24, Exercise: 5.2, Q: 1, 4, 8, 9, Exercise: 5.3, Q: 8, Review Exercise: 5, Q: 1

UNIT - 6: MATRICES AND DETERMINANTS
Classwork: Exercise: 6.1, Q: 4 (A, J), Exercise: 6.2, Q: 3 (C), Q: 7 (A), Exercise: 6.3, Q: 1 (v), Q: 2 (C), Q: 3 (ii), Q: 8, 10, Exercise: 6.4, Q: 2, 7, 14, 16, Exercise: 6.5, Q: 1 (ii), Q: 2 (iii), Q: 3 (ii), Q: 4 (b), Exercise: 6.6, Q: 1, Q: 2 (ii), Q: 4 (ii), Q: 5 (iii)

UNIT - 7: FUNDAMENTALS OF GEOMETRY
Classwork: Exercise: 7.1, Q: 2, Q: 7 (iii, vii), Exercise: 7.2, Q: 2, Exercise: 7.3, Q: 2, 5, Exercise: 7.4, Q: 1 [a (i, iii), d], Q: 5
Homework: Exercise: 7.1, Q: 4, 5, Q: 7 (iv, ix), Exercise: 7.3, Q: 3 Review Exercise: 7, Q: 1

UNIT - 8: PRACTICAL GEOMETRY
Classwork: Exercise: 8.1, Q: 1, 9, 13, 25, 28
Homework: Exercise: 8.1, Q: 3, 4, 11, 15, 17, 20, 24, 27, Review Exercise: 8, Q: 1

UNIT - 9: AREA AND VOLUMES
Classwork: Exercise: 9.1, Q: 1 (i), Q: 3, 10, Exercise: 9.2, Q: 2, 14, 19, Exercise: 9.3, Q: 1, 3, 8
Homework: Exercise: 9.1, Q: 1 (iii), Q: 6, 7, Exercise: 9.2, Q: 1, 6, 12, 17, Exercise: 9.3, Q: 2, 4, 5, 6, 7, Review Exercise: 9, Q: 1

UNIT - 10: INTRODUCTION TO COORDINATE GEOMETRY
Classwork: Exercise: 10.1, Q: 1 (ii, vii), Q: 2 (ii), Q: 4, 9, 11
Homework: Exercise: 10.1, Q: 1 (i, vi, x), Q: 2 (iv), Q: 6, 10, Review Exercise: 10, Q: 1
اِسلامیات (لازمن)

جزء اول: مفت حضرت آریا کریم، سوَرَۃ الاحزاب، سوَرَۃ انسحاب

الدرس الثامن،الف
کلاس وکر: مشغولیسوائات،سوال شمار 1
جدید شمار 11
کلاس وکر: مشغولیسوائات،سوال شمار 2
جدید شمار 13
کلاس وکر: مشغولیسوائات،سوال شمار 3
جدید شمار 15
کلاس وکر: مشغولیسوائات،سوال شمار 4
جدید شمار 17

Duly Approved by the Competent Authority vide Letter No. SO(ER-II)1-9/2020 dated 24.08.2020
CHAPTER 10: SIMPLE HARMONIC MOTION AND WAVES

Simple Harmonic Motion (Pg. 2), Motion of Mass Attached to a Spring (Pg. 2, 3), Motion of a Simple Pendulum (Pg. 4-6), Wave Motion (Pg. 7, 8), Activity: 10.2 (Pg. 7), Types of Mechanical Waves (Pg. 8-11), Relation between Velocity, Frequency and Wavelength (v=f λ) (Pg. 11-12), Examples: 10.1, 10.2 (Pg. 6, 12)

Exercise:

Classwork:
MCQs: (i, ii, iv-vi) (Pg. 16), Review Questions: (10.1, 10.4, 10.5) (Pg. 17), Numerical Problems: (10.1-10.3) (Pg. 17, 18)

Homework:
Review Questions: (10.2, 10.7) (Pg. 17), Numerical Problem: (10.4) (Pg. 18)

CHAPTER 11: SOUND WAVES

Sound Waves (Pg. 20), Sound Requires Material Medium for its Propagation (Pg. 21),

Next page:
Chapter 10: Simple Harmonic Motion and Waves

Simple Harmonic Motion (Pg. 2), Motion of Mass Attached to a Spring (Pg. 2, 3), Motion of a Simple Pendulum (Pg. 4-6), Wave Motion (Pg. 7, 8), Activity: 10.2 (Pg. 7), Types of Mechanical Waves (Pg. 8-11), Relation between Velocity, Frequency and Wavelength (v=fλ) (Pg. 11-12), Examples: 10.1, 10.2 (Pg. 6, 12)

Exercise:
Classwork: MCQs: (i, ii, iv-vi) (Pg. 16), Review Questions: (10.1, 10.4, 10.5) (Pg. 17), Numerical Problems: (10.1-10.3) (Pg. 17, 18)
Homework: Review Questions: (10.2, 10.7) (Pg. 17), Numerical Problem: (10.4) (Pg. 18)

Chapter 11: Sound Waves

Sound Waves (Pg. 20), Sound Requires Material Medium for its Propagation (Pg. 21),
Longitudinal Nature of Sound Waves (Pg. 21, 22), Characteristics of Sound (Loudness, Pitch, Quality, Intensity) (Pg. 22-24), Sound Intensity Level (Pg. 24, 25), Speed of Sound (Pg. 27), Audible Frequency Range (Pg. 30,31), Examples: 11.1, 11.2 (Pg. 25-28)

**Exercise:**

**Classwork:** Review Questions: (11.4, 11.5, 11.7-11.11) (Pg. 34), Numerical Problems: (11.1-11.4, 11.6) (Pg. 35)

**Homework:** MCQs: (i-vii) (Pg. 33), Review Questions: (11.1, 11.2) (Pg. 33, 34), Numerical Problem: (11.9) (Pg. 35)

**CHAPTER 12: GEOMETRICAL OPTICS**

Spherical Mirrors (Pg. 38-40), Image Location by Spherical Mirror Formula (Pg. 40, 41), Sign Conventions (Pg. 41), Refraction of Light (Pg. 42, 43), Laws of Refraction (Pg. 43), Refractive Index (Pg. 43), Total Internal Reflection (Pg. 44), Refraction through Prism (Pg. 46, 47), Lenses (Pg. 47, 48), Image Location by Lens Equation (Pg. 51, 52), Sign Conventions for Lenses (Pg. 52), Examples: 12.1-12.6 (Pg. 41, 42, 44, 52, 53)

**Exercise:**

**Classwork:** MCQs: (ix, x) (Pg. 64, 65), Review Questions: (12.6, 12.8-12.10) (Pg. 65), Numerical Problems: (12.2-12.5, 12.8-12.10) (Pg. 67)

**Homework:** MCQs: (i-vii) (Pg. 64), Review Questions: (12.4, 12.7, 12.12) (Pg. 65), Numerical Problem: (12.1) (Pg. 66)

**CHAPTER 13: ELECTROSTATICS**

Electrostatic Induction (Pg. 70, 71), Coulomb’s Law (Pg. 73, 74), Electric Field and Electric Field Intensity (Pg. 74-76), Electrostatic Potential (Pg. 76, 77), Capacitors and Capacitance (Pg. 77, 78), Combination of Capacitors (Pg. 79), Capacitors in Parallel (Pg. 79, 80), Capacitors in Series (Pg. 80, 81), Uses of Capacitors (Pg. 83), Examples: 13.1-13.4 (Pg. 74, 78-82)

**Exercise:**

**Classwork:** MCQs: (i, vi-xi) (Pg. 86-88), Review Questions: (13.2, 13.8-13.11, 13.13) (Pg. 88), Numerical Problems: (13.1-13.8) (Pg. 89)

**Homework:** Review Questions: (13.14, 13.17) (Pg. 88), Numerical Problems: (13.9, 13.10) (Pg. 89)

**CHAPTER 14: CURRENT ELECTRICITY**

Electric Current (Pg. 91, 92), The Measurement of Current (Pg. 93, 94), Potential Difference (Pg. 94, 95), Electromotive Force (e.m.f) (Pg. 95, 96), The Measurements of Potential Difference and Electromotive Force (Pg. 96, 97), Ohm’s Law (Pg. 97, 98), V-I Characteristics of Ohmic and Non-Ohmic Conductors (Pg. 98, 99), Combination of Resistors (Pg. 101), Series Combination (Pg. 101, 102), Parallel Combination (Pg. 102, 103), Electrical Energy and Joule’s Law (Pg. 104, 105), Electric Power (Pg. 106), Kilowatt-Hour (Pg. 106, 107), Examples: 14.1, 14.2,
CHAPTER 15: ELECTROMAGNETISM
Magnetic Effects of a Steady Current (Pg. 119, 120), Direction of Magnetic Field (Pg. 120), Magnetic Field of a Solenoid (Pg. 120, 121), Electromagnetic Induction (Pg. 125, 126), Direction of Induced e.m.f – Lenz’s Law (Pg. 128), Mutual Induction (Pg. 130, 131), Transformer (Pg. 131, 132), Working of a Transformer (Pg. 132), Example: 15.1 (Pg. 132, 133)

Exercise:
Classwork: MCQs: (i, ii, vii) (Pg. 136), Review Questions: (15.3, 15.7, 15.9), (Pg. 136, 137) Numerical Problems: (15.3, 15.4) (Pg. 138)
Homework: MCQs: (i, ii, viii, ix) (Pg. 135, 136), Review Questions: (15.11, 15.12) (Pg. 137), Numerical Problems: (15.1, 15.2) (Pg. 138)

CHAPTER 16: BASIC ELECTRONICS
Analogue and Digital Electronics (Pg. 143-145), Basic Operations of Digital Electronics – Logic Gates (Pg. 145, 146), AND Operation (Pg. 146,147), OR Operation (Pg. 147, 148), NOT Operation (Pg. 148, 149), NAND Gate (Pg. 149, 150), NOR Gate (Pg. 150), Uses of Logic Gates (Pg. 150), House Safety Alarm (Pg. 150, 151)

Exercise:
Classwork: Review Questions: (16.8, 16.9) (Pg. 154)
Homework: MCQs: (iii-vii) (Pg. 153), Review Questions: (16.7, 16.10) (Pg. 153, 154)

CHAPTER 17: INFORMATION AND COMMUNICATION TECHNOLOGY
Information and Communication Technology (Pg. 156), Components of Computer Based Information System (CBIS) (Pg. 156-158), Transmission of Light Signals through Optical Fibres only (Pg. 161, 162), Internet (Pg. 168, 169), Internet Services (Pg. 169), Browsers (Pg. 169), Electronic Mail (Pg. 169, 170)

Exercise:
Classwork: Review Questions: (17.2, 17.11) (Pg. 173)
Homework: MCQs: (i, iii, vi, vii) (Pg. 172, 173), Review Questions: (17.1, 17.3, 17.7) (Pg. 173)

CHAPTER 18: ATOMIC AND NUCLEAR PHYSICS
Atom and Atomic Nucleus (Pg. 175), Isotopes (Pg. 176), Natural Radioactivity (Pg. 176, 177), Background Radiations (Pg. 177), Nuclear Transmutations (Pg. 177-179), Half-Life and its Measurement (Pg. 180, 181), Radioisotopes and their Uses (Pg. 182-184), Fission Reaction (Pg. 185, 186), Nuclear Fusion (Pg. 187), Examples: 18.1, 18.2, 18.4 (Pg. 175, 176, 181, 184)
Exercise:
Classwork: MCQs: (i, ii, iv, ix) (Pg. 189, 190), Review Questions: (18.1, 18.3, 18.5-18.9, 18.12, 18.13) (Pg. 190), Numerical Problems: (18.1-18.3, 18.5, 18.7, 18.9) (Pg. 191, 192)
Homework: Review Questions: (18.2, 18.4, 18.10) (Pg. 190)

EXPERIMENTS:
1. To verify the Laws of Refraction by using a Glass Slab.
2. To determine the Critical Angle of Glass using a Semi Circular Slab and a Light Ray Box or by Prism.
3. To trace the path of a ray of light through Glass Prism and measure the Angle of Deviation.
4. To find the Focal Length of a Convex Lens by Parallax Method.
5. Verify Ohm’s Law (using Wire as Conductor).
6. To study Resistors in Series Circuit.
7. To study Resistors in Parallel Circuit.
8. To find the Resistance of Galvanometer by Half Deflection Method.
9. To verify the Truth Tables of OR, AND, NOT, NOR and NAND Gates.

CHAPTER 9: CHEMICAL EQUILIBRIUM

Practicals:
No Practical

Questions:
Classwork: Multiple Choice Questions (1, 3, 4, 5, 9, 12, 13) (Pg. 16-17)
Homework: Short Answer Questions (2, 3, 5-9, 11) (Pg. 18); Extensive Questions (3, 4) (Pg. 18); Numericals (1, 4) (Pg. 18-19)

CHAPTER 10: ACIDS, BASES AND SALTS
Concepts of Acids and Bases, General Properties and uses of Acids, General Properties and uses of Bases (Pg. 21-23, 25-30), pH Scale, Indicators, Problems: 10.2, 10.3, Salts and its Preparation only (Pg. 32-40)

Practicals:
1. Standardize the Given NaOH Solution Volumetrically.
2. Determine the Exact Molarity of a Solution of Oxalic Acid Volumetrically.
3. Demonstrate that Some Natural Substances are Weak Acids.
4. Classify Substances as Acidic, Basic or Neutral.

Questions:
Classwork: Multiple Choice Questions (1-3, 5, 7, 9, 10-13, 17-19) (Pg. 46-47)
Homework: Short Answer Questions (1-9) (Pg. 48); Extensive Questions (1-5) (Pg. 49); Numericals (1, 4); (Pg. 50)

CHAPTER 11: ORGANIC CHEMISTRY
Organic Compounds, Classification of Organic Compounds (Pg. 52-57), Alkanes and Alkyl Radicals, Functional Groups (Pg. 66-71)

Practicals:
1. Identify Carboxylic Acids using Sodium Carbonate Test.
2. Identify Phenol using Ferric Chloride Test.

Questions:
Classwork: Multiple Choice Questions (10-12, 15, 22, 23) (Pg. 77-78)

Homework: Short Answer Questions (5-11) (Pg. 78);
Extensive Questions (3, 5, 7-10, 12) (Pg. 79)

CHAPTER 12: HYDROCARBONS
Hydrocarbons and its types, Alkanes, Alkenes and Alkynes (Pg. 81-93)

Practicals:
1. Identify Saturated and Unsaturated Organic Compounds by KMnO₄ Test.

Questions:
Classwork: Multiple Choice Questions (1, 3, 4, 6-8, 12-16) (Pg. 97-98)

Homework: Short Answer Questions (2, 4, 5, 7, 9-13, 15, 18) (Pg. 99)
Extensive Questions (1, 3, 4, 6) (Pg. 100)

CHAPTER 13: BIOCHEMISTRY
Carbohydrates and its three types, Proteins and its Building Blocks only (Amino Acids), Lipids, Fatty Acids (Excluding their Sources and Uses) (Pg. 102-106)

Practicals:
1. Demonstrate that Sugar Decomposes into Elements and other Compounds.

Questions:
Classwork: Multiple Choice Questions (1-8, 12-15) (Pg. 114-115)

Homework: Short Answer Questions (1-6, 8-10, 13) (Pg. 116);
Long Answer Questions (1-3, 5) (Pg. 116)

CHAPTER 14: ENVIRONMENTAL CHEMISTRY-I (THE ATMOSPHERE)
Layers of Atmosphere, Pollutants its sources and types, Oxides of Carbon (CO₂ and CO), Greenhouse Effect and Global Warming (Pg. 118-123), Acid Rain and its Effects, Ozone Depletion and its Effects (Pg. 128-130)

Practicals:
No Practical

Questions:
Classwork: Multiple Choice Questions (1, 3-8, 10, 13-16, 18) (Pg. 134-135)

Homework: Short Answer Questions (3, 5, 7, 8, 10, 12) (Pg. 136);
Long Answer Questions (2, 3, 5, 8) (Pg. 136)
CHAPTER 15: ENVIRONMENTAL CHEMISTRY-II (WATER)
Water as Solvent, Soft and Hard Water, Disadvantages of Hard Water, Water Pollution, Waterborne Infectious Diseases (Pg. 139-147)
Practicals: No Practical Questions: 
Classwork: Multiple Choice Questions (3, 8-12, 14-16) (Pg. 151-152) Homework: Short Answer Questions (2-4, 11-14) (Pg. 152-153); Extensive Questions (1, 3, 5, 7-9) (Pg. 153)

CHAPTER 16: CHEMICAL INDUSTRIES
Basic Metallurgical Operations, Manufacture of Sodium Carbonate by Solvay’s Process (Pg. 155-162), Manufacture of Urea, Importance and Status of Urea (Pg. 164, 165)
Practicals: No Practical Questions: 
Classwork: Multiple Choice Questions (1-9) (Pg. 174-175) Homework: Short Answer Questions (1-9) (Pg. 175-176); Extensive Questions (1-3, 5) (Pg. 176)

CHAPTER 10: GASEOUS EXCHANGE
Gaseous Exchange in Plants (Pg. 2, 3), Gaseous Exchange in Humans, The Air Passageway, The Mechanism of Breathing (Pg. 4-8), Respiratory Disorders (Bronchitis, Pneumonia and Asthma Only), Bad Effects of Smoking (Pg. 11-15)
Practicals: No Practicals Questions: 
Classwork: Multiple Choice Questions (1-6, 9, 10) (Pg. 16) Homework: Short Questions (1-3) Understanding the Concept (Qs: 1, 2, 4) (Pg. 17)

CHAPTER 11: HOMEOSTASIS
Homeostasis in Plants, Removal of Extra Carbon dioxide and Oxygen, Removal of Extra Water, Removal of Other Metabolic Wastes (Pg. 18-20), The Urinary System of Humans, Structure of Kidney, Functioning of Kidney, Osmoregulatory Function of Kidney (Pg. 22-26)
Practicals: No Practicals Questions: 
Classwork: Multiple Choice Questions (1-9) (Pg. 29-30) Homework: Short Question (2), Understanding the Concept (Qs: 1-5) (Pg. 30)
CHAPTER 12: COORDINATION AND CONTROL
Types of Coordination, Coordinated Action, Human Nervous System, Nerve Cell or Neuron, Divisions of the Nervous System, Brain, Spinal Cord, Peripheral Nervous System, Reflex Action (Pg. 32-41), Endocrine System, Important Endocrine Glands, Feedback Mechanisms (Pg. 47-51)

Practicals:
No Practicals

Questions:
Classwork: Multiple Choice Questions (1, 4, 6-10) (Pg. 53)
Homework: Short Questions (1-5, 8), Understanding the Concept (Qs: 1-3, 9-11) (Pg. 54)

CHAPTER 13: SUPPORT AND MOVEMENT
Human Skeleton, Role of Skeletal System, Bone and Cartilage, Components of Human Skeleton, Types of Joints, Roles of Tendons and Ligaments, Muscles and Movement (Pg. 57-64)

Practicals:
1. Investigation of the nature of bone (by putting three pieces of rib bone of lamb in water, NaOH and dilute HCl)

Questions:
Classwork: Multiple Choice Questions (1, 2, 4-10) (Pg. 66-67)
Homework: Short Questions (1, 2, 4), Understanding the Concept (Qs: 1-4) (Pg. 67)

CHAPTER 14: REPRODUCTION
Reproduction, Methods of Asexual Reproduction, Binary Fission, Fragmentation, Budding, Spore Formation, Parthenogenesis (Pg. 70-74), Artificial Vegetative Propagation (Pg. 76), Sexual Reproduction in Plants, Pollination, Germination of Seed, Sexual Reproduction in Animals (Pg. 84), Fertilization (Pg. 86), AIDS - A Sexually Transmitted Disease (Pg. 89)

Practicals:
1. Observation of binary fission of amoeba using slides, photomicrographs or charts
2. Observation of budding in yeast from prepared slides

Questions:
Classwork: Multiple Choice Questions (1, 2, 5, 6) (Pg. 91)
Homework: Short Questions (2-5), Understanding the Concept (Qs: 1, 3, 5) (Pg. 92)

CHAPTER 15: INHERITANCE
Introduction to Genetics, Chromosomes and Genes, Watson Crick Model of DNA, How does DNA of Chromosomes Work?, Genotype and its Types, Mendel’s Laws of Inheritance, Mendel’s Law of Segregation, Mendel’s Law of Independent Assortment (Pg. 94-101)
Practicals:
No Practicals

Questions:
Classwork: Multiple Choice Questions (1-7) (Pg. 109-110)
Homework: Short Questions (1-3), Understanding the Concept (Qs:1-3) (Pg.110)

CHAPTER 16: MAN AND HIS ENVIRONMENT
Levels of Ecological Organization, Components of Ecosystem (Pg. 113, 114), Flow of Materials (Pg. 116, 117), Interactions in Ecosystems (Pg. 122, 123), Symbiosis (Parasitism, Mutualism, Commensalism) (Pg. 123-125), Conservation of Nature, Basic Information about Dengue Fever (Pg. 132-134)

Practicals:
No Practicals

Questions:
Classwork: Multiple Choice Questions (1, 4, 6, 7) (Pg. 135)
Homework: Short Questions (1,2,4,5), Understanding the Concept (Qs: 1,4)(Pg. 135, 136)

CHAPTER 17: BIOTECHNOLOGY
Introduction of Biotechnology (Pg. 135), Fermentation (Alcoholic Fermentation, Lactic Acid Fermentation), Fermentation in Biotechnology, Applications of Fermentation (Pg. 139-142), Genetic Engineering, Basic Steps in Genetic Engineering, Achievements of Genetic Engineering (Pg. 144-147)

Practicals:
No Practicals

Questions:
Classwork: Multiple Choice Questions (1-4) (Pg. 148)
Homework: Short Questions (1-3, 5), Understanding the Concept (Qs: 1, 3, 4) (Pg. 148)

CHAPTER 18: PHARMACOLOGY
Medicinal Drugs(Pg. 150-151), Addictive Drugs, Sedatives, Narcotics, Hallucinogens, Drug Addiction and Associated Problems, Antibiotics and Vaccines, Antibiotics, Antibiotic Resistance, Vaccines, Mode of Action of Vaccines (Pg. 153-156)

Practicals:
No Practicals

Questions:
Classwork: Multiple Choice Questions (1-8) (Pg. 157)
Homework: Short Questions (1, 2, 4, 5), Understanding the Concept (Qs: 1-5) (Pg. 157- 158)
UNIT 1: PROBLEM SOLVING
Problem Solving Method (List of Steps of Problem-Solving, Design Algorithm and Draw Flowchart, Write the Program (Coding), Test and Debug the Program) (Pg. 1-3), Algorithm (Pg. 4), Strategy for Developing Algorithm (Pg. 4, 5), Problem 2 (Pg. 6), Flowchart (Pg. 8, 9)

Classwork: Q: 2, 5, 7, 10 (i, v, vii, ix, x) (Pg. 10-12)

Homework: Q: 6, 8, 10 (iv, viii) (Pg. 12)

UNIT 2: DATA TYPES, ASSIGNMENT AND INPUT / OUTPUT STATEMENTS
Introduction (Pg. 13), Writing Programs in GW-BASIC (Create and Save the Program, Load the Program, Execute the Program) (Pg. 14, 15), Structure of BASIC Program (Pg. 15), Reserved Words (Pg. 17), Variables (Rules for Naming Variables in BASIC, Type Declaration Characters, Types of Variables) (Pg. 17, 18), Constants (Pg. 18, 19), BASIC Commands (AUTO, EDIT, LIST, LOAD, RUN, SAVE, SYSTEM) (Pg. 19-26), BASIC Statements (END, REM) (Pg. 27), Operators in BASIC (Pg. 28-31), BASIC Statements (READ/DATA, INPUT, PRINT (Pg. 33-37)

Classwork: Q: 2, 4, 6, 10 (ii, ix) (Pg 38-40)

Homework: Q: 5, 7, 9, 10 (vii, viii) (Pg. 39, 40)

UNIT 3: CONTROL STRUCTURES
Introduction (Pg. 41), Selection Structure (Pg. 45-48), Loops (Pg.48-50)

Classwork: Q: 2, 4, 7, 12, 14 (Pg. 51, 52)

Homework: Q: 5, 8, 10 (Pg. 52)

UNIT 4: ARRAYS
Introduction (Pg. 53), What is an Array? (Pg. 53, 54), Filling and Printing of an Array (Pg. 54, 55), Types of Array (Pg. 56), One-Dimensional Array only(Pg. 56, 57)

Classwork: Q: 2, 6, 11,18 (Pg. 59, 60)

Homework: Q: 5, 10, 9, 14, 17 (vii, viii) (Pg. 60)

UNIT 5: SUB-PROGRAM AND FILE HANDLING
Introduction (Pg. 61), Built-in-Function (ABS, INT, RND, LOG, DATE$, VAL, MID$, RIGHTS, CHR$ only) (Pg. 61-67), User-Defined Functions (Pg. 67-69)

Classwork: Q: 2, 5, 10, 11, 13 (Pg.76, 77)

Homework: Q: 4, 6, 9, 12 (Pg. 77)

UNIT 6: GRAPHICS IN BASIC
Introduction (Pg. 79), SCREEN Statement (Pg. 80, 81), PSET Statements (Pg. 83, 84), LINE, CIRCLE, DRAW Statements (Pg. 84-86)

Duly Approved by the Competent Authority vide Letter No. SO(ER-II)/1-9/2020 dated 24.08.2020
UNIT 2: DOS INTERNAL COMMANDS
1. Demonstration of DIR Command in detail including switches used with it
2. Demonstration of CD, MD, RD, and CLS Commands
3. Demonstration of Copy and DEL/ Erase Command
4. Demonstration of TIME, DATE, VOL and VER Commands
5. Demonstration of Xcopy Commands
6. Demonstration of CHKDSK and DISKCOPY Commands
7. Demonstration of ATTRIB Commands
8. Demonstration of FORMAT Commands

UNIT 3: INTRODUCTION TO WINDOWS
9. Creating New Folder
10. How to Search for a File or Folder
11. To Cut/Copy and Paste a File Folder from one location to another
12. How to Use Recycle Bin
13. To Display the My Recent Document Folder on Start Menu and Open Recently used document
14. How to Open and Make Selections from a Menu
15. How to Access Control Panel and Set the Time & Date
16. How to Arrange a Remove Icons
17. How to Add or Remove Programs and Windows Components

UNIT 1: INTRODUCTION TO GW BASIC
1. Write a Program to find sum and average of three numbers
2. Write a Program to find area of a rectangle
3. Write a Program to find area and circumference of a circle
4. Write a Program to calculate surface area and volume of a cube
5. Write a Program to convert temperature from Fahrenheit to Centigrade

LIST OF PRACTICALS FOR GRADE IX (OLD)
UNIT 1: DEMONSTRATION OF COMPUTER COMPONENTS
Entire Unit Excluded

UNIT 2: DOS INTERNAL COMMANDS
1. Demonstration of DIR Command in detail including switches used with it
2. Demonstration of CD, MD, RD, and CLS Commands
3. Demonstration of Copy and DEL/ Erase Command
4. Demonstration of TIME, DATE, VOL and VER Commands
5. Demonstration of Xcopy Commands
6. Demonstration of CHKDSK and DISKCOPY Commands
7. Demonstration of ATTRIB Commands
8. Demonstration of FORMAT Commands

LIST OF PRACTICALS FOR GRADE X
UNIT 1: INTRODUCTION TO GW BASIC
1. Write a Program to find sum and average of three numbers
2. Write a Program to find area of a rectangle
3. Write a Program to find area and circumference of a circle
4. Write a Program to calculate surface area and volume of a cube
5. Write a Program to convert temperature from Fahrenheit to Centigrade

Duly Approved by the Competent Authority vide Letter No. SO(ER-II)1-9/2020 dated 24.08.2020
6. Write a Program to calculate distance covered by a car moving at an average speed of V (m/s) in time t (sec). The Program should input average speed and time.
7. Write a Program that asks for name, roll number, class, section and marks in different subjects of a students of class 10. The program should calculate and display total obtained marks and percentage of marks.
8. Write a Program to input a number and display whether it is even or odd
9. Write a Program to calculate grade of a student
10. Write a Program to write first ten natural numbers using for next loop
11. Write a Program to sum the series 2, 4, 6..., 100
12. Write a Program to display a table of given number up to ten values
13. Write a Program for the use of iteration of statement, (Read 5 values from keyboard and find their mean gravity and compare the mean value against actual value 9.8 metres / sec²)
14. Write a program to find Factorial of a given number
15. Write a program to fill an array with letters a, b, c, d
16. Write a program to enter integer type data into an array and then to print the values in reverse order
17. Write a program to read an array with 20 numbers and find the product of numbers in that array
18. Write a program to find largest number out of given 10 numbers using an array
19. Write a program to input numbers in two-dimensional array with 2 columns and 2 rows and display the result in third array by adding these array
20. Write a program to sort the list of 20 names in descending order
21. Write a program using subroutine named mean and call this in main function
22. Write a program to print characters “tan” from the string “Pakistan Zindabad” using mid$ function
23. Write a program to print first three characters from any string given by user, using left$ function
24. Write a program to draw a line using LINE statement
CHAPTER 7: ENERGY
Classwork: Exercise Question No. 5, 6, 8-10 (Pg. 109)
Homework: Exercise Question No. 1, 2, 3 (i-iv), 4 (i-ii, v) (Pg. 108, 109)

CHAPTER 8: CURRENT ELECTRICITY
Introduction, Electric Current (Pg. 110, 111), Potential Difference, Ohm's Law, Resistance, Components of a Circuit, Direct and Alternating Current, Uses of D.C. and A.C, Domestic Electric Supply (Pg. 112-119), Dangers of Electricity and Precautionary Measures (Pg. 120-122)
Classwork: Exercise Question No. 5-9 (Pg. 127)
Homework: Exercise Question No. 1, 2 (i-iv), 3 (ii-v), 4 (i-ix) (Pg. 126, 127)

CHAPTER 9: BASIC ELECTRONICS
Introduction, Semi-Conductors (Pg. 128-130), Radio Waves, Computer (Pg. 131-139), Information Technology (Pg. 142-146)
Classwork: Exercise Question No. 4, 6, 7, 9, 10 (Pg. 149)
Homework: Exercise Question No. 2 (i-iv), 3 (iii, iv, v) (Pg. 148, 149)

CHAPTER 10: SCIENCE AND TECHNOLOGY
Role of Science and Technology, Lasers, Fiber Optics, Satellites and Radars (Pg. 150-154), X-Rays, Ultrasound, E.C.G. (Pg. 156-159) M.R.I., C.T. Scan, Angiography (Pg. 159, 160)
Classwork: Exercise Question No. 5-8, 11, 12 (Pg. 167)
Homework: Exercise Question No. 1 (i-iii, v), 2 (ii-iv) (Pg. 166)

CHAPTER 11: SPACE AND NUCLEAR PROGRAMME OF PAKISTAN
Importance of Space Programme, Space Programme of Pakistan, Nuclear Power Programme of Pakistan (Pg. 168-173)
Classwork: Exercise Question No. 4-7 (Pg. 175)
Homework: Exercise Question No. 1-3 (Pg. 174)