ACCELERATED

L E A R N I N G
PROGRAMME

(A L P)

<div dir="rtl">

تسریع التعلُّم پروگرام

برائے

سیکنڈری کلاسز

پنجاب کریکولم اینڈ ٹیکسٹ بک بورڈ، لاہور

</div>

۱ اُردو

درسی کتاب کے اسباق: (مصنّفین اور شعرا کے تعارف میں سے کوئی سوال نہیں بنایا جائے گا۔)

☆حمد (نظم) ☆نعت (نظم) ☆نظریہ پاکستان ☆مجھے میرے دوستوں سے بچاؤ ☆مُلَمّع ☆چغل خور ☆نام دیو مالی ☆علی بخش ☆میدانِ کربلا میں گرمی کی شِدّت (نظم) ☆فاطمہ بنت عبداللہ (نظم) ☆حسرتؔ موہانی (غزل) ☆جگرؔ مراد آبادی (غزل)

اُردو قواعد و انشا (10_9):

(الف)۔ مضمون نگاری (صفحہ نمبر 84 تا 100)

☆زم۔۔۔زم ☆علامہ محمد اقبالؒ ☆قائدِ اعظمؒ ☆یومِ آزادی ☆محنت کی برکتیں ☆ماں باپ کے ساتھ سلوک ☆شہری اور دیہاتی زندگی ☆وقت کی پابندی

(ب)۔ تفہیمِ عبارات (صفحہ نمبر 117 تا 124، عبارت نمبر 1، 6، 7، 8، 9، 10، 13، 15):

☆پنجاب کی حد۔۔۔اوسان جاتے رہے۔ ☆مختلف انسان۔۔۔پھیلی ہوئی ہیں۔ ☆ہم عصروں۔۔۔سر باندھا ہے۔ ☆اسلام نے۔۔۔نہیں ہے۔ ☆سکون کے وقت۔۔۔ہو رہا ہے۔ ☆انتخاب کتب۔۔۔بلند ہوتا ہے۔ ☆قائدِ اعظمؒ ہمیشہ۔۔۔کارنامہ ہے۔ ☆اقبالؒ کی۔۔۔عطا کیا۔

Unit # 1: Hazrat Muhammad ﷺ as an Embodiment of Justice
Class work: Vocabulary (Exercise: C, D), Reading for Comprehension (Exercise: B, C), Grammar, Pronunciation Key, Oral Communication Skills, Writing Skills
Home work: Vocabulary (Exercise: A, B), Reading for Comprehension (Exercise: A)

Unit # 3: Try Again
Class work: Comprehension (Exercise: A, B, C, D), Grammar, Oral Communication Skills, Writing Skills,
Home work: Vocabulary

Unit # 4: First Aid
Class work: Comprehension (Exercise: B, C), Grammar, Oral Communication Skills, Writing Skills
Home work: Vocabulary, Comprehension (Exercise: A),

Unit # 6: Television vs. Newspaper
Class work: Reading Comprehension (Exercise: B, C), Grammar, Oral Communication Skills, Writing Skills
Home work: Vocabulary, Reading Comprehension (Exercise: A)

Unit # 8: Peace (Poem)
Class work: Vocabulary (Exercise: E), Reading Comprehension (Exercise: A, B), Grammar, Oral Communication Skills, Writing Skills
Home work: Vocabulary (Exercise: A, B, C, D),

Unit # 10: A World Without Books
Class work: Vocabulary, Grammar, Oral Communication, Writing Skills
Home work: Reading Comprehension

Unit # 13: Faithfulness
Class work: Vocabulary, Grammar, Oral Communication, Writing Skills
Home work: Reading Comprehension

(Grammar & Composition)

Essay Writing
Class work: Sports and Games, Libraries, Health, The Moon Soon
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)
Direct and Indirect Speech
Classwork: Practice will be given.
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

UNIT - 1: Quadratic Equations
Class Work: 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
Home Work: 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
Class Work: Exercise:2.1, Q:1(ii),Q:2(i),Q:3 Exercise:2.2,Q:1-4,
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:4,10
Home Work: 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:2(ii), 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
Class Work: 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:2,9
Home Work: 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,iv,v,vi),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
Class Work: Exercise:4.1,Q:8, Exercise:4.2,Q:2,Exercise:4.3, Q:8,
Home Work: Exercise:4.1,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
Class Work: 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)
Home Work: 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
Class Work: Exercise:6.1,Q:1, Exercise:6.2, Q:3,7, Exercise:6.3, Q:5(ii)
Home Work: 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

Class Work: Exercise#:7.1, Q:1(vii),Q:2(ii), Q:3(v), Q:4(viii), Q:5(iii), Exercise:7.2, Q:1(ii),,Exercise:7.3,Q:1(ii),Q:2(i),Q:3(iv),Q:4(vi),Q:9, Q:12(viii) Exercise:7.4, Q:7,20, Exercise:7.5:Q: 1,9,

Home Work: Exercise#:7.1, Q:1(ii,iii), Q:3(ii ,vi), Q:4(ii,iii,v),Q:5(vii,viii), Exercise:7.2,Q:3(i), Q:5,6,Exercise:7.3,Q:1(iii),Q:2(ii),Q:3(iii),Q:4(ii),Q:8, Q:12(i,v,xi) Exercise:7.4, Q: 10,11,16,24, Exercise:7.5,Q:3,4,8, Miscellaneous Exercise:7,Q:1,Q:2

UNIT - 8: Projection of a Side of a Triangle

Class Work: Theorem:2, Miscellaneous Exercise:8,Q:3,5,8 (Exercises are excluded)

Home Work: Theorem:2, Miscellaneous Exercise:8,Q:3,5,8 (Exercises are excluded)

UNIT - 9: Chords of a Circle

Class Work: Theorem:2,4, (Exercises are excluded)

Home Work: Theorem:2,4, Miscellaneous Exercise:9,Q:1(v-xiv), (Exercises are excluded)

UNIT - 10: Tangent to a Circle

Class Work: Theorem:1,3, (Exercises are excluded)

Home Work: Theorem:1,3, Miscellaneous Exercise:10,Q:1(v-xi), (Exercises are excluded)

UNIT - 11: Chords and Arcs:

Class Work: Theorem:1,4, (Exercise is excluded)

Home Work: Theorem:1,4, Miscellaneous Exercise:11,Q:1, (Exercise is excluded)

UNIT - 12: Angle in a Segment of a Circle

Class Work: Theorem:1,2 (Exercise is excluded)

Home Work: Theorem:1,2 (Exercise is excluded)

UNIT - 13: Practical Geometry-Circles

Class Work: Exercise: 13.1,Q:1,Q:4, Exercise 13.2: Q:4,Q:5,Exercise:13.3,Q:6,9,11

Home Work: Exercise: 13.1,Q:1,Q:4, Exercise 13.2: Q:4,Q:5,Exercise:13.3,Q: 6,9,11, Miscellaneous Exercise:13,Q:1

MATHEMATICS (Arts Group) 4

UNIT - 1: Algebraic Formulas and Applications

Class Work: Exercise:1.1, Q:1,8 ,11,14,15 ,27,32, Exercise:1.2,Q:1, ,8,14,21,: Exercise:1.3, Q:1(ii),Q:2(iii), Q:3(iv), Q:5

Home Work: Exercise:1.1, Q: 3,5, 9,16,19,20, 28,31 Exercise:1.2,Q: 3,5,9,11,16,18,: Exercise:1.3,Q:2(vi), Q:3(ii ,vi,viii), Q:8,9, Review Exercise:1,Q:I

UNIT - 2: Factorization

Class Work: Exercise:2.1, Q:1,11, 16,: Exercise:2.2, Q:2 ,12,Exercise:2.3,Q:,7,9, 20, Exercise:2.4,Q:1 ,15 ,22,:Exercise:2.5,Q:,3,6,19,

Home Work: Exercise:2.1, Q:3,6,8,13: Exercise:2.2, Q: 4,8,11, Exercise:2.3,Q:1,11,16,18, Exercise:2.4,Q:3,8,10,13, 17,21,Exercise:2.5,Q:1,10,12,16,18 , Review Exercise:2,Q:I

UNIT - 3: Algebraic Manipulation

Class Work: 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

Home Work: 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:I

UNIT - 4: Linear Equations and Inequalities

Class Work: Exercise:4.1, Q:1(ii),Q:3,10,18, Exercise:4.2, Q:3, 12,16

Home Work: Exercise:4.1, Q:1(iii). Q: 5,8 ,16 ,20,: Exercise:4.2, Q:3,6,9, 15 , Review Exercise:4, Q:I

UNIT - 5: Quadratic Equations

Class Work: Exercise:5.1, Q:1,8,15,19,25,: Exercise:5.2,Q:3, 12,: Exercise: 5.3, Q: 2 ,8

Home Work: Exercise:5.1, Q:2, 9,12,13,14, 18,24, Exercise:5.2,Q:1, 4 ,8,9, Exercise: 5.3, Q:2,8, Review Exercise:5,Q:I

UNIT - 6: Matrices and Determinants

Class Work: 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(ii)

Home Work: Exercise:6.1,Q:4(B-I,K,L): Exercise:6.2, Q:3(D), Q:7(B,C),: Exercise:6.3. Q:1(ii,vi),Q:2(B,E),Q:5(ii), Q:6,11,: Exercise:6.4, Q: 5,6,12: Exercise:6.5, Q:1(iv),Q:3(vi,vii), Exercise:6.6,Q:2(v,vi), Q:4(v,vi), Q:5(iv), Review Exercise:6,Q:I

UNIT - 7: Fundamentals of Geometry

Class Work: 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

Home Work: Exercise:7.1,Q:4,5,Q:7(iv,ix),Exercise:7.3, Q:2,5, Review Exercise:7, Q:I

UNIT - 8: Practical Geometry

Class Work: Exercise:8.1, Q:1,9,13,25,28,

Home Work: Exercise:8.1, Q:,3,4 ,11,15,17,20,24,27, Review Exercise: 8,Q:I

UNIT - 9: Area and Volumes

Class Work: Exercise:9.1,Q:1(i), Q:3,10,: Exercise:9.2, Q: 2,14, 19,Exercise:9.3, Q:1,3,8

Home Work: 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:I

UNIT - 10: Introduction to Coordinate Geometry

Class Work: Exercise:10.1, Q:1(ii,vii), Q:2(ii), Q:4,9,11

Home Work: Exercise:10.1, Q:1(i,vi,x), Q:2(iv), Q:6,10, Review Exercise:10,Q:I

الجزءالاول : من ھدی القرآن الکریم ،سورۃ الاحزاب

الدرس الرابع ،الف

کلاس ورک : مشقی سوالات ،سوال نمبر 1   ہوم ورک : مشقی سوالات ،سوال نمبر 2 تا3

الدرس الرابع ،ب

کلاس ورک : مشقی سوالات ،سوال نمبر 1   ہوم ورک : مشقی سوالات ،سوال نمبر 2 تا3

الدرس الرابع ،ج

کلاس ورک : مشقی سوالات ،سوال نمبر 1 :الف ،ب جزء   ہوم ورک : مشقی سوالات ،سوال نمبر 1 :ج جزء

الدرس الخامس ،الف

کلاس ورک : مشقی سوالات ،سوال نمبر 1 تا2   ہوم ورک : مشقی سوالات ،سوال نمبر 3

الدرس الخامس ،ب

کلاس ورک : مشقی سوالات ،سوال نمبر 1 تا2   ہوم ورک : مشقی سوالات ،سوال نمبر 3 تا4

الجزءالثانی : من ھدی الحدیث

حدیث نمبر 11

کلاس ورک : حدیث نمبر 11 کے متن کی درست تلفظ لے ساتھ ادائیگی کرنااور ترجمہ دہرانا

ہوم ورک : ترجمہ اور تشریح نوٹ بک پرلکھنااور یادکرنا

حدیث نمبر 21

کلاس ورک : حدیث نمبر 12 کے متن کی درست تلفظ لے ساتھ ادائیگی کرنااور ترجمہ دہرانا

ہوم ورک : ترجمہ اور تشریح نوٹ بک پرلکھنااور یادکرنا

حدیث نمبر 31

کلاس ورک : حدیث نمبر 13 کے متن کی درست تلفظ لے ساتھ ادائیگی کرنااور ترجمہ دہرانا

ہوم ورک : ترجمہ اور تشریح نوٹ بک پرلکھنااور یادکرنا

حدیث نمبر 41

کلاس ورک : حدیث نمبر 41 کے متن کی درست تلفظ لے ساتھ ادائیگی کرنااور ترجمہ دہرانا

ہوم ورک : ترجمہ اور تشریح نوٹ بک پرلکھنااور یادکرن

کلاس ورک: حدیث نمبر 15 کے متن کی درست تلفظ کے ساتھ ادائیگی کرنا اور ترجمہ دہرانا

ہوم ورک: ترجمہ اور تشریح نوٹ بک پر لکھنا اور یاد کرنا

الجزء الثالث

عائلی زندگی کی اہمیت

کلاس ورک: مشقی سوالات، سوال نمبر 1 تا 2   ہوم ورک: مشقی سوالات، سوال نمبر 3 تا 5

ہجرت و جہاد

کلاس ورک: مشقی سوالات، سوال نمبر 1 تا 2   ہوم ورک: مشقی سوالات، سوال نمبر 3 تا 5

حقوق العباد

کلاس ورک: مشقی سوالات، سوال نمبر 1 تا 2   ہوم ورک: مشقی سوالات، سوال نمبر 3 تا 5

6   مطالعہ پاکستان

باب 6: تاریخ II

(3) لیبر اصلاحات، (4) زرعی اصلاحات، 1973ء کے آئین کے اہم پہلو، 1977ء سے 1988ء کے درمیان پاکستان میں نفاذ اسلام کے اہم پہلو، پاکستان بطور ایٹمی طاقت، لوکل گورنمنٹ پلان 2000ء، انتخاب 2002ء اور بحالی جمہوریت۔

کلاس ورک: مشقی سوالات: سوال 1 جزو الف (2,4,5,7)، سوال 1 جزو ب (1,7,10)

ہوم ورک: مشقی سوالات: سوال 2 (1-4)

باب 7: پاکستان کے خارجہ تعلقات

پاکستان کی خارجہ پالیسی کے مقاصد، پاکستان کے ہمسایہ ممالک کے ساتھ تعلقات (پاک چین تعلقات، پاک بھارت تعلقات، پاک ایران تعلقات، پاک افغانستان تعلقات)، مسئلہ کشمیر کی ابتدا اور ارتقا، پاکستان کے اسلامی کانفرنس کی تنظیم کے رکن ممالک کے ساتھ تعلقات (پاکستان اور سعودی عرب، پاکستان اور ترکی)، پاک امریکہ تعلقات، وسطی ایشیائی ممالک کے ساتھ تعلقات، اقوام متحدہ، اقوام متحدہ کے ادارے، دنیا میں قیام امن کے لیے پاکستان کا کردار۔

کلاس ورک: مشقی سوالات: سوال 1 جزو الف (11-1،8,10)، سوال 1 جزو ب (1-9)

ہوم ورک: مشقی سوالات: سوال 3 (1-7,9,11,12)

باب 8: معاشی ترقی

معاشی ترقی کی تعریف، معیشت کے اہم شعبے، (الف) معدنیات، (ب) زراعت، پاکستان کی زرعی پیداواری صلاحیت اس کے مسائل

اور پیداوار میں اضافے کے لیے اقدامات، پاکستان کی اہم نہریں، سندھ طاس معاہدہ، زراعت میں جدّت پسندی، ہماری زراعت کو درپیش اہم مسائل ، زرعی مسائل کا حل، پاکستان کی صنعتیں، توانائی کے مختلف وسائل (بجلی، قدرتی گیس، معدنی تیل، کوئلہ)، غربت کی وجوہات اور اس کے خاتمے کے لیے اقدامات۔

کلاس ورک: مشقی سوالات: سوال 1 جزو الف (1,3,7-9)، سوال 1 جزو ب (1,3,4,9)

ہوم ورک: مشقی سوالات: سوال 2(1-4,8-9)

باب 9: آبادی معاشرہ اور پاکستان کی ثقافت

پاکستان میں افزائش آبادی اور تقسیم، شہری اور دیہی بنیاد پر آبادی کی تقسیم، صنفی لحاظ سے آبادی کی تقسیم، پاکستان میں شرح خواندگی، پاکستان میں تعلیم کی صورتِ حال، پاکستان کا تعلیمی ڈھانچہ، پاکستان کے تعلیمی مسائل، تعلیمی مسائل کے حل کے حوالے سے تجاویز، پاکستانی معاشرے اور ثقافت کی نمایاں خصوصیات، پاکستان کے اہم معاشرتی مسائل، قومی اور علاقائی، زبانیں (اردو)، علاقائی زبانیں پاکستان میں غیر مسلم اقلیتوں کا کردار۔

کلاس ورک: مشقی سوالات: سوال 1 جزو الف (1,3,5,7-9)، سوال 1 جزو ب (1-5,7,9)

ہوم ورک: مشقی سوالات: سوال 2(2-4,6,8)

باب 10: تحفّظِ نسواں

صنفی حساسیت اور اس کی آگہی (صنف کی تعریف، صنفی کردار سازی، صنفی کردار سازی کے ادارے)، اسلام اور صنف، پنجاب حکومت کا تحفّظ نسواں ایکٹ 2016ء، تحفّظ نسواں ضلعی کمیٹی کے افعال۔

کلاس ورک: مشقی سوالات: سوال 1 (مکمل)، سوال 2 (مکمل)

ہوم ورک: مشقی سوالات: سوال 3 (مکمل)

Chapter 10: Simple Harmonic Motion and Waves
Simple Harmonic Motion, Motion of Mass Attached to a Spring, Motion of a Simple Pendulum, Wave Motion, Ripple Tank
Activity: 10.2, Types of Mechanical Waves, Relation between Velocity, Frequency and Wavelength ($v=f\lambda$),
Examples: 10.1, 10.2
Exercise:
Class Work: MCQs: (i-vi, viii, ix), Review Questions: (10.1, 10.4, 10.5), Numerical Problems: (10.1-10.3, 10.9, 10.10)
Home Work: Review Questions: (10.2, 10.7), Numerical Problems: (10.4)
Chapter 11: Sound Waves
Sound Waves, Sound is produced by a Vibrating Body Activity 11.1, Sound

Requires Material Medium for its Propagation, Longitudinal Nature of Sound Waves, Characteristics of Sound, Loudness, Pitch, Quality, Intensity, Sound Intensity Level, Speed of Sound, Audible Frequency Range, Ultrasound, Examples: 11.1, 11.2

Exercise:

Class Work: Review Questions: (11.4, 11.5, 11.7-11.11, 11.15, 11.18), Numerical Problems: (11.1-11.6)

Home Work: MCQs: (i-vii), Review Questions: (11.1, 11.2), Numerical Problems: (11.9)

Chapter 12: Geometrical Optics

Spherical Mirrors, Image Location by Spherical Mirrors, Sign Conventions, Refraction of Light, Laws of Refraction, Refractive Index, Total Internal Reflection, Refraction through Prism, Lenses, Image Location by Lens Equation, Sign Conventions for Lenses, Examples: 12.1-12.6

Exercise:

Class Work: MCQs: (ix, x), Review Questions: (12.6, 12.8-12.10), Numerical Problems: (12.2-12.5, 12.7-12.10)

Home Work: MCQs: (i-vii), Review Questions: (12.4, 12.7, 12.12), Numerical Problems: (12.1)

Chapter 13: Electrostatics

Electrostatic Induction, Coulomb's Law, Electric Field and Electric Field Intensity, Electrostatic Potential, Capacitors and Capacitance, Combination of Capacitors, Capacitors in Parallel, Capacitors in Series, Uses of Capacitors, Examples: 13.1-13.4

Exercise:

Class Work: MCQs: (i, vi-xi), Review Questions: (13.2, 13.8-13.14), Numerical Problems: (13.1-13.8)

Home Work: Review Questions: (13.17), Numerical Problems: (13.9, 13.10)

Chapter 14: Current Electricity

Electric Current, The Measurement of Current, Potential Difference, Electromotive Force (e.m.f), The Measurements of Potential Difference and Electromotive Force, Ohm's Law, V-I Characteristics of Ohmic and Non-Ohmic Conductors, Combination of Resistors, Series Combination, Parallel Combination, Electrical Energy and Joule's Law, Electric Power, Kilowatt-Hour, Examples: 14.1, 14.2, 14.4, 14.5, 14.7, 14.8

Exercise:

Home Work: MCQs: (i-ix), Review Questions: (14.3-14.5, 14.10, 14.11), Numerical Problems (14.1, 14.2, 14.4-14.7)

Class Work: Review Questions: (14.1, 14.6, 14.8), Numerical Problems (14.3)

Chapter 15: Electromagnetism

Magnetic Effects of a Steady Current, Direction of Magnetic Field, Magnetic Field of a Solenoid, Electromagnetic Induction, Direction of Induced e.m.f – Lenz's Law, Mutual Induction, Transformer, Working of a Transformer, Example: 15.1

Exercise:

Class Work: MCQs: (iii-vii), Review Questions: (15.1, 15.3, 15.7, 15.9), Numerical Problems: (15.3, 15.4)

Home Work: MCQs: (i, ii, viii, ix), Review Questions: (15.11, 15.12), Numerical Problems: (15.1, 15.2)

Chapter 16: Basic Electronics

Analogue and Digital Electronics, Basic Operations of Digital Electronics – Logic Gates, AND Operation, OR Operation, NOT Operation, NAND Gate, NOR Gate, Uses of Logic Gates, House Safety Alarm

Exercise:

Class Work: Review Questions: (16.8, 16.9)

Home Work: MCQs: (iii-vii), Review Questions: (16.7, 16.10)

Chapter 17: Information and Communication Technology

Information and Communication Technology, Components of Computer Based Information (CBIS), Transmission of Light Signals through Optical Fibres only, Internet, Internet Services, Browsers, Electronic Mail

Exercise:

Class Work: Review Questions: (17.2, 17.11)

Home Work: MCQs: (i, iii, vi, vii), Review Questions: (17.1, 17.3, 17.7)

Chapter 18: Atomic and Nuclear Physics

Atom and Atomic Nucleus, Isotopes, Natural Radioactivity, Background Radiations, Nuclear Transmutations, Half-Life and its Measurement, Radioisotopes and their Uses, Fission Reaction, Nuclear Fusion, Examples: 18.1, 18.2

Exercise:

Class Work: MCQs: (i-ix), Review Questions: (18.1, 18.3, 18.5-18.9, 18.11-18.13), Numerical Problems: (18.1-18.3, 18.5, 18.7, 18.9)

Home Work: Review Questions: (18.2, 18.4, 18.10)

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

Definition of and properties of Reversible Reaction, definition of chemical equilibrium state and Dynamic Equilibrium state, definition of Law of Mass Action and its derivation (Kc=[C][D]/[A][B]), definition of Equilibrium Constant and its Units, Problems: 9.1, 9.2, 9.3 (pp. 2-5, 6-12).

Practicals:
No Practical
Questions:
Classwork: Multiple Choice Questions (1,3,,4, 5,9,12,13) (pp.16-17)
Homework: Short Answer Questions (2, 3, 5-9,11) (p.18); Extensive Questions (3,4) (p.18); Numericals (1, 4) (pp.18-19)

Chapter 10: Acids, Bases and Salts

Concepts of Acids and Bases, General Properties uses of Acids and Bases, pH Scale, Indicators, Problems: 10.2, 10.3, Salts (pp. 21-23, 25-30, 32-37, 38-40).

Practicals:
Standardize the Given NaOH Solution Volumetrically.
Determine the Exact Molarity of a Solution of Oxalic Acid Volumetrically.
Demonstrate that Some Natural Substances are Weak Acids.
Classify Substances as Acidic, Basic or Neutral.
Questions:
Classwork: Multiple Choice Questions (1-3, 5,7, 9, 10-13, 17-19) (pp.46-47)
Homework: Short Answer Questions (1-9)(pp.48); Extensive Questions(1-9)(p.18); Numericals (1, 4); (p.50)

Chapter 11: Organic Chemistry

Definition of Organic Compounds and types of organic compounds according to the foumula, Classification of Organic Compounds, homologous series.(pp. 52- 57, 66-71).

Practicals:
Identify Carboxylic Acids using Sodium Carbonate Test.
Identify Phenol using Ferric Chloride Test.
Questions:
Classwork: Multiple Choice Questions (10-12, 15, 22, 23) (p.76-78)

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

Chapter 12: Hydrocarbons

Hydrocarbons, Alkanes, Alkenes, Alkynes (pp. 81- 93).

Practicals:

Identify Saturated and Unsaturated Organic Compounds by KMnO4 Test.

Questions:

Classwork: Multiple Choice Questions (1, 3, 4, 6-8, 12-16) (pp.97-99)

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

Chapter 13: Biochemistry

Carbohydrates and types of carbohydrates, Proteins, Lipids, Fatty Acids (Excluding their Sources and Uses); (pp. 102-106).

Practicals:

Demonstrate that Sugar Decomposes into Elements and other Compounds.

Questions:

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

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

Chapter 14: Environmental Chemistry-I (The Atmosphere)

Layers of Atmosphere, Pollutants, Greenhouse Effect and Global Warming, Acid Rain and its Effects, Ozone Depletion and its Effects; (Page 118-125, 126, 127-130).

Practicals:

No Practical

Questions:

Classwork: Multiple Choice Questions (1,3,4-8, 10, 13-16, 18) (pp.134-136)

Homework: Short Answer Questions (3, 5-8, 10, 12) (p.136); Long Answer Questions (2,3,5,7,8) (p.136)

Chapter 15: Environmental Chemistry-II (Water)

Water as Solvent, definition of soft and hard water, disadvantages of hard water, Water Pollution, Waterborne Infectious Diseases; (pp. 139-140, 144-147)

Practicals:

No practical

Questions:

Classwork: Multiple Choice Questions (3, 8-12, 14-16) (pp.151-152)

Homework: Short Answer Questions (2-4, 11-14) (pp.152-153); Extensive Questions (1,3,5,7-9) (p.153);

Chapter 16: Chemical Industries

Basic Metallurgical Operations, Manufacture of Sodium Carbonate by Solvay's Process,

Manufacture of Urea, Importance and Status of Urea (pp. 155-162, 164-165)
Practicals:
No practical
Questions:
Classwork: Multiple Choice Questions (1-9) (pp.174-175)
Homework: Short Answer Questions (1-9) (pp.175-176); Extensive Questions (1-3,5) (p.176);

Chapter 10: Gaseous Exchange
Gaseous Exchange in Plants, Gaseous Exchange in Humans, The Air passageway, The Mechanism of Breathing, Respiratory Disorders (Bronchitis, Pneumonia, Asthma), Bad Effects of Smoking - (pp. 2-15)
Practicals:
No practicals
Questions:
Classwork: Multiple Choice (1-6, 9-10) (pp. 16)
Homework: Short Questions (1, 2, 3) Understanding the Concepts (1, 2, 4) - (pp. 17)
Chapter 11: Homeostasis
Homeostasis in Plants, Removal of Extra Carbon dioxide and Oxygen, Removal of Extra Water, Removal of other Metabolic Wastes, The Urinary System of Humans, Structure of Kidney, Functioning of Kidney, Osmoregulatory Function of Kidney, - (pp. 18-26)
Practicals:
No practicals
Questions:
Classwork: Multiple Choice (1-9) (pp. 29-30)
Homework: Short Questions (2), Understanding the Concepts (1-5) - (pp. 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, Endocrine System, Important Endocrine Glands (complete), Feedback Mechanism - (pp.32-52)
Practicals:
No practicals
Questions:
Classwork: Multiple Choice (1, 4, 6-10) (pp. 53)
Homework: Short Questions (1-5, 8), Understanding the Concepts (1-3, 9-11) - (pp. 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 - (pp. 57-65)

Practicals:

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 (1-10) (pp. 66-67)

Homework: Short Questions (1-4), Understanding the Concepts (1-4) - (pp. 67)

Chapter 14: Reproduction

Reproduction, Method of Asexual Reproduction, Binary Fission, Fragmentation, Budding, Spore Formation, Parthenogenesis, Artificial Vegetative propagation, Sexual Reproduction in Plants, Pollination, Germination of seed, Sexual Reproduction in Animals, Fertilization, AIDS - A Sexually Transmitted Disease - (pp. 70-89)

Practicals:

Observation of binary fission of amoeba using slides, photomicrographs or charts
Observation of budding in yeast from prepared slides

Questions:

Classwork: Multiple Choice (1, 2, 5) (pp. 91)

Homework: Short Questions (2-5), Understanding the Concepts (1, 3, 5) - (pp. 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 - (pp. 94-101)

Practicals:

No practicals

Questions:

Classwork: Multiple Choice (1-7) (pp.109-110)

Homework: Short Questions (1-3), Understanding the Concepts (1-3) - (pp.110)

Chapter 16: Man and His Environment

Levels of Ecological Organization, Components of Ecosystem, Flow of Materials, Biogeochemical Cycles (Carbon cycle, Nitrogen Cycle), Interactions in Ecosystems, Symbiosis (Parasitism, Mutualism, Commensalism), Conservation of Nature, Basic information about Dengue Fever - (pp.113-134)

Practicals:

No practicals

Questions:

Classwork: Multiple Choice (1, 2, 4-7) (pp. 135)

Homework: Short Questions (1, 2, 4, 5), Understanding the Concepts (1, 4) - (pp. 135-136)

Chapter 17: Biotechnology

Introduction of Biotechnology, Fermentation (Alcoholic Fermentation, Lactic acid Fermentation), Fermentation in Biotechnology, Applications of Fermentation, Genetic Engineering, Basic Steps in Genetic Engineering, Achievements of Genetic Engineering - (pp. 138-147)

Practicals:

No practicals

Questions:

Classwork: Multiple Choice (1-4) (pp. 148)

Homework: Short Questions: (1-3, 5), Understanding the Concepts (1, 3, 4) - (pp. 148)

Chapter 18: Pharmacology

Medicinal Drugs, Addictive Drugs, Sedatives, Narcotics, Hallucinogens, Drug Addiction and Associated problems, Antibiotics and Vaccines, Antibiotics, Antibiotic Resistance, Vaccines, Mode of Action of Vaccines - (pp. 150-156)

Practicals:

No practicals

Questions:

Classwork: Multiple Choice (1-8) (pp. 157)

Homework: Short Questions (1, 2, 4, 5), Understanding the Concept (1-5) - (pp. 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)

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

Home Work: 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)

Class Work: Q. 2,4, 6,10 (ii, ix), (Pg 38-40)

Home Work: 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)

Class Work: Q. 2, 4,7, 12, 14 (Pg. 51-52)

Home Work: 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 (Pg. 56-57),

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

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

Unit 5: Sub-Program and File Handling: I

ntroduction (Pg. 61), Built-in Function (ABS, INT, RND, LOG, DATE$, VAL, MID$, RIGT$, CHR$) (Pg. 61-67), User-Defined Functions (Pg. 67-69)

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

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

Unit 6: Graphics in BASIC: Introduction (Pg. 79), SCREEN Statement (Pg. 80, 81), PSET Statement (Pg. 83, 84), LINE, CIRCLE, DRAW Statements (Pg. 84-86)

Class Work: Q.2, 7, 8, 10 (Pg. 87-88)

Home Work: Q. 4, 9, 11,15 (Pg. 88)

Unit 7: Microsoft Word:

Entire unit excluded.

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

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

List of Practicals for Grade X

Unit 1: Introduction to GW Basic
1. Write a Program to find sum of 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
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 meters / 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 6: ENVIRONMENT AND NATURAL RESOURCES:
Class Work: 6.1. Earth's Atmosphere, 6.2. Environmental Pollution, 6.5. Dairy and Poultry Farming, 6.6. Wildlife and National Parks,
Home Work: Exercise : Question No. 1(i – v, viii,ix), 2 (i-iv), 3(i-iii,v), 4, 5, 6, 7, 8, 11(b,c,d)
CHAPTER 7: ENERGY:
Class Work: Introduction, 7.1. Work and Energy, 7.2. Different Forms of Energy, 7.4. Demand of Energy, 7.5. Production of Electrical Energy, 7.6. Measurement of Energy.
Home Work: Exercise: Question No. 1,2,3 (i-iv), 4 (i-ii,v),5,6,8,9,10
CHAPTER 8: CURRENT ELECTRICITY:
Class Work: Introduction, 8.1. Electric Current, 8.3. Potential Difference, 8.4. Ohm's Law, 8.5. Resistance 8.6. Components of a Circuit, 8.7. Direct and Alternating Current, 8.8. Uses of D.C and A.C, 8.9. Domestic Electric Supply, 8.11. Dangers of Electricity and Precautionary Measures,
Home Work: Exercise: Question No. 1,2 (i-iv), 3(ii-v), 4(i-ix),5,6,7,8,9
CHAPTER 9: BASIC ELECTRONICS:
Class Work: Introduction, 9.1. Semi-conductors, 9.3. Radio Waves, 9.4. Computer, 9.6. Information Technology
Home Work: Exercise: Question No. 2(i-iv), 3(iii, iv & v),4, 6, 7, 9, 10
CHAPTER 10 : SCIENCE AND TECHNOLOGY:
Class Work: 10.1. Role of Science and Technology, 10.2. Lasers, 10.3. Fiber Optics, 10.4. Satellites and Radars, 10.6. X-Rays, 10.7. Ultrasound, 10.8. E.C.G. 10.10. M.R.I., 10.11. C.T Scan, 10.12. Angiography,
Home Work: Exercise: Question No. 1 (i-iii,v) ,2 (ii-iv), 5,6, 7,8, 11,12
CHAPTER 11: SPACE AND NUCLEAR PROGRAMME OF PAKISTAN:
Class Work: 11.1. Importance of Space Programme , 11.2. Space Programme of Pakistan, 11.3. Nuclear Power Programme of Pakistan,
Home Work: Exercise: Question No. 1,2,3,4,5,6,7