FEDERAL BOARD OF INTERMEDIATE AND SECONDARY EDUCATION
H-8/4, ISLAMABAD

NO.3-21/FBISE/RES/CC/244

14 October 2020

NOTIFICATION

However, there will be no change in the format and style of question papers.

( ZULFIQAR ALI RIZVI )
Director Research
Ph: 051-9269504

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12. All Sectional Heads of FBISE, Islamabad
13. Chat Room, FBISE
Reduced Syllabus
HSSC-I and HSSC-II
Examination 2021 under FBISE

National Curriculum Council
Ministry of Federal Education and Professional Training
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# REDUCED SYLLABUS
## ENGLISH COMPULSORY HSSC-I

<table>
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**NOTE:** The inclusion & exclusion of units encompass the relevant exercises also.
REDUCED SYLLABUS
ENGLISH ELECTIVE-XI

NOTE: There will be no change in the following fields:
1. Any essay of relatively advance nature
2. A passage of fairly advanced prose for comprehension and precis writing
3. Grammar – Synthesis Idioms

Section “A” Functional English
1. Any essay of relatively advanced nature
2. A passage of fairly advanced prose followed by:
   a. A series of comprehension questions
   b. A precis of all parts of the passage

Section “B” Text
3. Poetry: The Magic Casement: Book-II (Poem No.5, 7, 11, 12, 16, 19 and 20 are excluded)
4. Prose: A new Anthology of Essays (Essay No.3, 5, 8, 11, 12, 13, 19 and 22 are excluded)
5. Grammar: Synthesis/Idioms
نصاب اردو لازمی
برائے جماعت گیارہ

حصہ نثر:

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<tr>
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<td>اپنی مدد آب</td>
<td>خان</td>
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حصہ غزل:

1. قیفاں ای آے صدا کر جلے 
2. قتل عاشق کسی معشوق سے کچھ دور نہ تھا 
3. اچک چھم مین جب وہ گل اندام آگیا 
4. ناپنا انسان سے نہ ندی اپنی دو 
5. داغ دبلو 

نوٹ: حک شده غنوان کے مصنفین، شعراء کا تعارف اور مشقی سوالات بهی شامل نصاب نئین بیون گئی。

قواعد و انشا:

صنعت اور اصناف سخن کی تعریف اور پچان
قصاید اور مثنیات: حمد، نعت، مرثیہ، شیرآشوب، غزل، نظم اور غزل میں فرق
مضمون، ناول، تراما، سفران، چھوٹی کتابی، مکتوب نگاری، مطلع، محقق، کافی، تصویری، اسعار، ردیف، تشبیہ، استعارہ، روزمرہ، محاریہ

حصہ انشا پردای:

1. روداد/مکالمہ 2. درخواست/خط 3. تلخیص
نصب ارودو (ادب)

بجعاة غيرو

مصطلح

سحق

نبرهار

اردویهی ایرانی (اعلایاضاف)

ماردازی

شاخهی اصلی

نیبستور

زیرکی

سردلادان

الکسی بارکار

حص شاعری

شاعر

نظم

جم

تخت

شوقت

محمداقلان

شادین

عدی

جلط

زندگی نیست چه چه?

کلمات

مولاهاطافا محمد جاهانی

🖤
نصاب الاصليات (العزي)
10. إن الله يأمر بالعدل و الإحسان
11. إننا نحن نذكرون الذكر و إننا له نحفظون
12. يأهلها الذين أتمنوا كتاب علىكم الصيام

و emploi الهاء
1. إننا الأعمال بالنبيات، وإنما لكل أمر من مانوى
2. إنما بعثت لاتباع حسن الأخلاق
3. لا يؤمن أحدكم حتى أكون أحب إليه من والده و ولده
4. والناس أجمعين
5. لا يؤمن أحدكم حتى يحب لأخيه ما يحب لنفسه
6. المسلم من سلم المسلمون من لسانه و يده
7. لا يرحم الله من لا يرحم الناس
8. كل المسلم على المسلم حرام ذمه و ماله و عرضه
9. ما عال من اقتضى
10. من سلك طرفاً يطلبه فيه علم ما سلك الله به طرفاً من طرقو الجنة
11. المؤمن أو المسلمون كالجنة الواحد إن اشتكى شيئًا
12. مئة و جذام ذاك في سائر جسده
13. الجنة تحت أقدام الأمهات
14. الصدقة ينجي و الكذب يهلك
اسلامات اختیاری گیارہوین جماعت کے لیے

الف. القرآن الحکیم: سورة البقهراء ابک سے پانچ رکوع تک ب. الحديث: ابک سے پندرہ احادیث

اربعین امام نودی ج. سياسي و تقافتی تاریخ اسلام، سیرت النبی ﷺ، خلافت راشدہ، د. فقه اسلامی (اسلامی قانون کے ماؤد)

ضمیمہ پرچہ اول

الف. القرآن الحکیم (سورة البقهراء)

1. تعارف، وحی، مکی اور مدنی سورتون کی خصوصیات 2. سورة البقهراء ابک سے پانچ رکوع تک ب. الحديث

ب. ابک سے پندرہ احادیث اربعین

1. حديث و سنت کا مفہوم، ابیت 2. امام نودی فقط ترجمہ ج. سياسي و تقافتی تاریخ اسلام

2. سیرت النبی ﷺ

ب. ابیوک کی احادیث

1. تبیغ اسلام و مشکلات، بحرہ حبشہ و مدنی، غزوات، صلح حدنیہ، فتح مکہ، حجه الوداع

2. آنحضرت ﷺ بحیثیت مصلح اعظم انسانیت

3. خلافت راشدہ

1. حضرت اوبیکر صدیق: انتخاب خلافت، فتنه ارتداد اور باعثیون کی سرکوبی، سیرت و کاربانبے نماں

2. حضرت عمر فاروق: اشاعت و فروغ اسلام، اصلاحات، سياسي، فوجی، عدالتی اور معاشرتی، سیرت و اخلاق

3. حضرت عثمان غنی: اشاعت و فروغ اسلام، شبادت، سیرت و اخلاق

4. حضرت سکو: نظام حکومت، شبادت، سیرت و اخلاق

5. حضرت ﷺ راشدین کے عید میں اسلام کی ترقی اس کے سياسي سماجی اقتصادی

6. خلافت راشدہ اور انتخاب

د. فقه اسلامی (اسلامی قانون) ماؤد

1. القرآن 2. الحديث 3. اجعس 4. قیاس
REDUCED SYLLABUS
ISLAMIC HISTORY-XI

I. Pre-Islamic Arabia
   Religious, Social Economic and Political conditions of Pre-Islamic Arabia

II. Early Life of Rasullah (S.A.W.)
   1. Birth and family background of Rasullah (S.A.W)
   2. Life before NUBUWAHT
   3. Life after declaration of NUBUWAHT

III. Spread of Islam at Makkah
   1. Migration to Habshah
   2. Journey to Taif and Miraj
   3. The pledges of Aqaba

IV. Spread of Islam at Madina
   1. Hijrat and its significance
   2. Islamic brotherhood
   3. Misaq-e-Madina
   4. Battle of Badr, Uhad, Ahzab, Khyber, Hunain and Tabuk
   5. Baite-Rizwan
   6. Conquest of Makkah
   7. HajjatulWidda and the Last Sermon features

V. Seerat-un-Nabi (S.A.W)
   Muhammad Rasullah (S.A.W)
   1. As a Prophet
   2. As a Statesman

VI. Khalafat-e-Rashdah
   1. Hazrat Abu Bakar Siddique: Introduction, initial difficulties, its remedies and contribution towards Islam
   2. HazratUmer Farooq: Introduction, Conquest (Qadsia and Yermook), administrative system, contribution towards Islam and achievements
   3. Hazrat Usman Ghani: Introduction, contribution towards Islam, martyrdom its causes, events and results
   4. Hazrat Ali Murtaza: Introduction, difficulties and events
   5. Achievements of Khalafat-e-Rashdah
I. Difficulties Faced by Pakistan after Independence
   1. Red Cliff’s Award and its injustice
   2. Accession of Princely States – Kashmir
   3. Refugee’s problem
   4. Administrative issues
   5. Water dispute

II. Constitutional Developments in Pakistan upto 1962
   1. Objective Resolution
   2. Salient features of:
      a. 1956 Constitution
      b. 1962 Constitution Salient features

III. Socio-Political Developments in Historical Perspective During 1962 – 1969
   1. Formation of one Unit
   2. Imposition of Martial Law
   3. Industrial and agriculture reforms
   4. 1965 War in relation to:
      i. The aggressive and inflexible attitude of Indian governments towards Pakistan

IV. Anatomy of the Happenings from 1969 to 1971
   1. Fall of Ayub’s regime and Yahyah’s Marshal Law
   2. Elections 1970
   3. Impact of 1970’s elections
   4. Sheikh Mujeb’s six points
   5. Army action and role of political parties
   6. Causes and lessons learnt from the debacle of Pakistan 1971

V. Pakistan Foreign Policy
   1. Main features of foreign policy
   2. Relations bonds with neighbouring countries
   3. Relations with Saudi Arabia
01. MEASUREMENTS
   1.2 Supplementary units (Radian, Steradian)
   1.8 Precision and accuracy
   1.9 Dimensions of physical quantities.

02. VECTORS AND EQUILIBRIUM
   2.6 Addition of vectors by rectangular components.
   2.7 Product of vectors.
   2.9 Torque
   2.10 Equilibrium.
   2.11 Conditions of equilibrium.

03. FORCES AND MOTION
   3.8 Linear momentum.
   3.9 Collisions
   3.11 Projectile Motion.

04. WORK AND ENERGY
   4.1 Work done by a constant force, work done by a variable force.
   4.2 Work done in a gravitational field.
   4.6 Absolute Potential energy.
   4.7 Escape velocity.

05. ROTATIONAL AND CIRCULAR MOTION
   5.1 Angular Motion
   5.2 Relation between angular and linear quantities.
   5.3 Centripetal Force and Centripetal Acceleration
   5.4 Torque and moment of inertia.
   5.5 Angular momentum and torque.
   5.6 Conversation of Angular Momentum
   5.7 K.E of rotation.
   5.8 Rolling of a Disc and hoop down the inclined plane.

06. FLUID DYNAMICS
   6.1 Viscous Fluids
   6.2 Fluid Friction and Stoke’s Law
   6.3 Terminal Velocity
   6.4 Equation of continuity.

07. OSCILLATIONS
   7.4 Circular motion and S.H.M.
   7.5 Simple Pendulum.
   7.7 Resonance
   7.9 Phase
   7.10 Damped Oscillations
08. WAVES
8.4 Speed of sound.
8.8 Beats
8.9 Reflection of Waves and Phase Change
8.10 Stationary Waves.
8.11 Transverse Stationary waves in a stretched string.
8.13 Resonance of air column and organ pipes.
8.14 Doppler effect.

09. PHYSICAL OPTICS
9.3 Huygen’s Principle.
9.4 Coherent Sources.
9.5 Interference of Light.
9.8 Michelson’s interferometer.
9.9 Diffraction of Light
9.10 Diffraction at a Single Slit
9.11 Diffraction grating.
9.12 Diffraction of x-rays by crystals.

10. THERMODYNAMICS
10.5 Thermodynamic System.
10.6 Reversible and Irreversible Processes
10.7 First law of thermodynamics.
10.8 Molar specific heat of a gas.
10.9 Heat engine.
10.10 Second law of thermodynamics.
10.11 Carnot heat engine.
10.13 Entropy.

NOTE: All MCQs, short questions and problems relevant to the abovementioned topics are included.
REDUCED SYLLABUS
BIOLOGY HSSC-I

NOTE:
1. Only topic based relevant MCQs, Short and Long Questions are included.
2. All information in side boxes is excluded.

1. CELL STRUCTURE AND FUNCTION
   1.2 Cell Wall and Plasma Membrane – The Boundary Wall
   1.3 Cytoplasm and Organelles
   1.4 Prokaryotic and Eukaryotic Cells

2. BIOLOGICAL MOLECULES
   2.3 Carbohydrates
      (Examples of Polysaccharides are excluded)
   2.4 Proteins
      2.4.1 Structure of Proteins (Amino Acids and Peptide Linkages)
      2.4.2 Classification of Proteins (Globular and Fibrous Proteins)
      2.4.3 Role of Proteins
   2.5 Lipids
      2.5.1 Classification (Acylglycerols)
      2.5.2 Properties of Fatty acids
      (Waxes, Terpenes, Steroids, Prostaglandins are excluded)
   2.6 Nucleic Acids
      2.6.1 Chemical Structure of Nucleic Acids
      2.6.3 Watson & Crick Model of DNA
      2.6.4 Concept of Gene
      2.6.5 RNA

3. ENZYMES
   3.1 Structure of Enzymes
   3.2 Mechanism of Enzyme Action
   3.4 Enzyme Inhibition (Competitive and Noncompetitive Inhibitors)

4. BIOENERGETICS
   4.1 Photosynthesis
      4.1.1 Role of Light
      4.1.2 Role of Photosynthetic Pigments
      4.1.3 Absorption Spectrum and Action Spectrum
      4.1.4 Arrangements of Pigments
      4.1.5 Role of Carbon dioxide
      4.1.6 Role of water
      4.1.7 Mechanism of Photosynthesis
      4.1.8 Light Dependent Phase
      4.1.9 Light Independent Phase
   4.2 Cellular Respiration
      4.2.3 Mechanism of AerobicRespiration
      4.2.4 Oxidation of Pyruvates
      4.2.5 Kreb’s Cycle
      4.2.6 Electron Transport Chain
      4.2.7 Chemiosmosis & Oxidative Phosphorylation

5. ACELLULAR LIFE
   5.3 Bacteriophage
      5.3.1 Structure of Bacteriophage
      5.3.2 Life Cycle of Bacteriophage
      5.3.3 Infection Process
      5.3.4 Replication of Bacteriophage
      5.3.5 Replication of Bacteriophage in Lysogenic cycle
13.2.3  Inflammatory Response

13.3  Third Line of Defense – The Specific Defenses
  13.3.2  Cell mediated and Antibody mediated immunity
          Activation of T-Cells excluded
1. **STOICHIOMETRY**  
Introduction  
1.1 Mole  
1.2 Avogadro’s Number  
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**Note:** Topic related questions of self-check exercises and end exercise are included. Society, technology and science of all chapters is not included.

It is obvious that questions related to the topics not mentioned above are not included in exam. Paper will be curriculum based not book based.
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**REduced Syllabus**

**Statistics-xi**

1. **Introduction to Statistics: Collection (1/8) and Presentation of Data**

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<td>Nature and Importance of the Science of Statistics, Statistical Data, Population and sample. Brief revision of classification, tabulation and frequency distributions and their graphic representation</td>
<td>Define Statistics, give importance of measurements and different fields of science where measurements are useful. Explain different types of raw data in the fields of Science and Humanities, mainly in Medicine, in Agriculture, in Chemistry and Psychology. Explain the difference between a population and a sample, use sketches for showing population. Explain the importance of the sample. Demonstrate types of frequency distributions like symmetrical and non-symmetrical Cumulative and relative frequency distributions be explained by the use of sketches, Explain bar charts in different forms namely; divided bar charts, compound bar charts. Give an explanation for expressing data in rectangles an pie chart.</td>
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2. **Measure of Location and Dispersion. (2/8)**

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<td>Arithmetic mean, Geometric mean. Median, Mode, Range, Mean Deviation, Variance, Standard deviation, Difference between Absolute and Relative Measures of Dispersion. Skewness.</td>
<td>Explain arithmetic mean and variance of raw data from a frequency table, using mid points and also by change of origin and scale and their properties. To explain geometric mean, use ungrouped data as well as grouped data. Explain the method of direct calculation using root and also by using logarithms. To explain median and quantiles graphical method be explained as well. Mathematical proofs are not required.</td>
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3. **Index Number (1/8)**

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<td>Introduction to Index numbers concept of price index numbers steps involved in the construction of price index numbers “Unweighted price index numbers (fixed based and chain based method)” weighted price index</td>
<td>Explain the index numbers as a useful statistical technique to assess the growth or fall of a certain item or economic series with respect to time or any other unit. Price index numbers by simple relative and link relative</td>
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methods be explained. Price index and its constructions must be given as examples. Fixed base and chain base methods for price indices be explained. The concept of weights be explained with reference to the arithmetic means in grouped data. Laspeyr’s and Fisher’s indices be explained by applying the standard results on a number of exercises. Consumer price index number be explained in general and with reference to Pakistan. Similarly wholesale price index numbers to be also explained in a similar way.

4. **Simple Linear Regression and Correlation (1/8)**

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| Bivariate data (non-random versus random variable) scatter diagram; estimation of regression parameters by least squares method, properties of the regression line; interpretation and applications of the regression line. Bivariate data, (random versus random variable) scatter diagram; point estimation of population correlation co-efficient; properties of the sample correlation co-efficient; interpretation and application. | Explain “Bivariate data”, by giving sketches of scatter diagrams when one variable is specified and several values of response variable are assumed given at each non random variable similarly the sketches when both variable are random be also drawn and explained. Least square method be explained, normal equation be formed and estimation of regression parameters be given in terms of $\Sigma X$, $\Sigma Y$, $\Sigma XY$, $\Sigma Y^2$, and $\Sigma X^2$. Both the regression lines be explained by considering an example in which few values of the two variables are given the properties to be included are :

i. Sum up squares of deviation from regression line is minimum.

ii. The point of intersection of regression lines at $(X, Y)$.

Interpret by explaining the use of line of regression for forecasting and for estimating at “$n$” unknown values of independent variable.

Explain the correlation co-efficient by explaining bivariate data in which both variables are random, the calculation of correlation co-efficient be explained by considering examples. The properties of correlations co-efficient be explained by considering:

i. $r_{xy} = r_{yx}$

ii. $r$ lying between –1 and +1.
iii. the value of correlation co-efficient does not change by the change of origin and scale and correlation can be obtained by geometric mean of the regression co-efficient.

5. Analysis of time series (1/8)

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<td>Explain the time series as a series in which one variable is time occurring at specified intervals (non random and the other variable is random). Examples be given from Economics, Public Administration, Business administration, Trade and Commerce. Fluctuation in the time series be explained in terms of trend which is given in terms of components of a time series and random fluctuations as noise. Linear and quadratic forms of time series be considered. The linear and quadratic time series be compared with trend obtained by free hand, semi averages and moving averages method.</td>
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   A. Introduction
      1. Wants and satisfaction
      2. Goods and services
      3. Utility and scarcity
      5. Definition by:
         a) Adam Smith
         b) Alfred Marshall
         c) Lionel Robbins.

II. Consumer’s Behaviour and its Analysis
   1. Definition
   2. Meaning
   3. Rationale
   4. The law of diminishing marginal utility with table and graph.
   5. The law of equimarginal utility or law of substitution with formula and diagram.
   6. Indifference curve.

III. Basic Tools of Statistics and Mathematics in Economics
   i.) Variables:
       Continuous discontinuous, independent dependent.
   ii.) Linear equation with group.
   iii.) Quadratic equation.
   iv.) Simultaneous equations.

IV. Demand
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   2. Law of demand.
   3. Demand function and functional equation of demand.
   4. Movement along the demand curve and shift in demand curve.
   5. Price elasticity of demand (Arc & point) and methods of measurement.
   7. Factors influencing the elasticity of demand.
   8. Practical uses of the concept of elasticity of demand.

V. Supply
   1. Definitions stock and supply.
   2. Law of supply.
   4. Movement along the supply curve and shift in supply curve.
   5. Elasticity of supply and its measurement.
6. Factors influencing the elasticity of supply.
7. Practical uses of the concepts.

VI. Equilibrium
1. Concept of equilibrium.
2. Equilibrium of demand and supply.
3. Equilibrium in price and equilibrium in output.
4. The effects on equilibrium in price and output due to change in demand and supply.

IX. Cost of Production
1. Definition, classification, Fixed and variable.
2. Total, average and marginal cost.
3. Relationship between total average and marginal cost.

X. Revenue Analysis
1. Definition.
2. Total marginal and average revenue under perfect competition and monopoly.
3. Price and output determination and short and long run under perfect competition and monopoly.

XI. Market
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1. Perfect competition and monopoly.
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6. WIRELESS COMMUNICATIONS
   6.1 Introduction

7. DATABASE FUNDAMENTALS
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   7.2 Basic Database Terminologies
   7.3 Planning a Database
   7.4 Data Modeling and Entity Relationship Diagram
   7.5 Relational Schema

8. DATABASE DEVELOPMENT
   8.1 Introduction
      (i) Identify various relational database management systems (MS Access, Open Office Base, SQL Server)
      (ii) Select any suitable DBMS as an application for creating and maintaining databases
      (iii) Explain the steps involved to create and save a database (For Practical only)
      (iv) Explain the following in Database Environment:
          o Database Toolbar
          o Database Window
          o Objects
            ▪ Tables
            ▪ Queries
            ▪ Forms
            ▪ Reports
8.2 Working with Tables
(i) Explain different ways of creating, saving and editing a table in database. (For Practical only)
(ii) Identify various available data types
(iii) Create a primary key and foreign key in the tables. (For Practical only)
(iv) Create and edit relationship among tables. (For Practical only)
(v) Use navigation buttons to navigate through records in a table. (For Practical only)
(vi) Add, modify and delete records from a table. (For Practical only)

8.3 Working with Forms
(i) Explain different ways of creating, saving and editing a form in a database. (For Practical only)
(ii) Know different Form views
(iii) Use the navigation buttons to navigate through records displayed in a Form. (For Practical only)
(iv) Add, modify and delete records. (For Practical only)
(v) Use Form controls. (For Practical only)

8.4 Working with queries and commands
(i) Explain different ways of creating, saving and editing a query in a database. (For Practical only)
(ii) Use following queries on database
   - SELECT (Where, Group by, Order by)
   - UPDATE
   - DELETE
   - INSERT
   - ALTER

8.5 Generating Reports
(i) Use the report wizard to generate a report. (For Practical only)
(ii) Use various report layouts/styles to produce reports
(iii) Set the sort order of records that will appear on the report
(iv) Customized reports using queries (macros and arithmetic expressions) (For Practical only)
(v) Save, view and print the report. (For Practical only)
نصاب عريجفي يوديوه بجماعت كلي

النِّجَاح
مُكَاَم إلَّا إخْلاَق
بِاِكْسْتَان
الشَّجَر
أَرْكَانِ الإِسْلَام
السِّيِّرَةُ النَّبِيَّةُ
الجُواُرُ
الشَّجَر
الجُواُرُ
الجُواُرُ
النِّجَاحُ النَّبِيَّةُ
المَشَاهِدَ
الجُواُرُ
السِّيِّرَةُ النَّبِيَّةُ
في الغَذِّ وَالْأَخْسَان
الحُكَّاَيَّاتُ وَالْطَّائِفَاتُ
الجُواُرُ
الشَّجَر

۱. من هذِي القرآن الكريم
۲. من هذِي الأخادِيث
۳. فكرة إنشاء باكستان
۴. في الحمد لله و السَّلام عليه
۵. من هذِي القرآن الكريم
۶. من السِّيِّرَةُ النَّبِيَّةُ
۷. المَخْترَعاتُ و المُكَتَّشِفاتُ الحديثة
۸. في الدِّينُ النَّبِيَّةُ
۹. في مَكَّتِ النَّبِيِّ
۱۰. الأدُّبُ
۱۱. الخليفة عمر بن عبد العزيز
۱۲. سُوق آثار كلي
۱۳. قضاء الأَمِين
۱۴. من هذِي القرآن الكريم
۱۵. في المَطَّارِ
۱۶. في الحكم
انصب فارقٌ گلارم بھون بجماعت کے لیے

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REDUCED SYLLABUS
HEALTH AND PHYSICAL EDUCATION-XI

A. Physical Education

1. Physical Education and its importance

3. Scope of activities:
   b. Recreational
   d. Rules and fundamental skill of games:
      i. Boys: Volleyball
      ii. Girls: Volleyball
   e. Rules and fundamental skill of Athletics:
      i. Boys: Short put: 4x100 meters relay
      ii. Girls: Short put: 4x100 meters relay

B. Health Education

1. Definition of health, its relationship to physical education

2. Human organism and how it works; functioning of the following systems (in detail):
   b. Respiratory

3. First Aid:
   a. Treatment of athletics injuries like sprain, strain, pulled muscle, sore muscle and cramp
   b. Fractures: Types and treatment
1. **Introduction**
   a. What is Philosophy?
   b. What are the specific philosophical questions?
   c. Philosophical Approaches Criticism/Speculation

2. **Philosophy and Religion**
   a. Questions asked in Philosophy and Religion
   b. Their treatment
   c. Difference
   d. Allama Muhammad Iqbal’s Educational Philosophy

3. **Philosophy and Science**
   a. What does science try to understand?
   b. How is it different from philosophy?
   c. What role does philosophy play in the growth of science?
      i. Interprets
      ii. Criticizes
      iii. Resolves conflicts
      iv. Justifies

4. **Knowledge**
   a. Definition of knowledge
   b. Sources of knowledge:
      i. Rationalism
      ii. Empiricism
      iii. Intuition and Revelation
      iv. Authority
         Introduction of basic philosophy of Imam Ghazali

5. **Metaphysics**
   a. Monism
   b. Dualism
   c. Pluralism
   d. School’s of Idealism and Materialism

6. **Ethics**
   a. Ethical theories:
      i. Golden Mean
      ii. Utilitarianism
      iii. Good will
   b. Islamic theory of Ethics
REDUCED SYLLABUS
GEOGRAPHY-XI

I. Understanding Geography
   1. The Nature of Geography
   2. Scope
   3. Relationship with other Sciences

II. The Earth Basic Concerns
   3. The Earth’s structure and composition

III. Rocks
   1. Formation classification and characteristics of rocks

IV. Major Land Forms
   1. Mountains Plateaus and plains

V. Denudation
   1. Weathering
   2. Erosion

VI. The Atmosphere
   1. Introduction
   2. Weather and Climate
   3. Distribution of Atmosphere and Pressure
   4. Winds
   5. Precipitation

VIII. Oceans and Seas
   1. The Oceans and Seas
   3. Ocean currents
I. Education
   1. Importance and description of Education
   2. Role and Scope of Education as a subject/discipline Teachers, Students, Content areas, Milieu, Environment Culture
   3. Function of Education
   4. Model of Education, Formal, informal and non-formal
      • Conversation
      • Transmission
      • Reformation

II. Aims of Education
   1. Spiritual and Moral aims
   2. Intellectual aims
   3. Economic/Vocational aims
   4. Citizenship (Socio-cultural) aims

III. Foundations of Education
   1. Introduction
   2. Islamic foundation of Education
   3. Importance of Education in Islam
   4. Sources of knowledge Philosophical foundations
   5. What is Philosophy, Philosophical foundation? Ideology, Religious, Customs, norms & students

IV. Human Development
   1. Explanation of the concepts of Human Development and Growth
   2. Difference between growth and development with examples
   3. Individual differences and teaching learning process

V. Learning
   1. Meaning and definitions
   2. Trial and error, imitation, insight (arising from intellectual rigour, learning by doing
   3. Law of readiness
   4. Law of Exercise
   5. Law of Effective
   6. Readiness, motivation, interest Attention, meaningful/relevant, attitude

VI. Society Community and Education
   1. Society and community (meaning and definition)
   2. Explain the Interrelationship of society and Education

VII. Guidance and Counseling
   1. Guidance and counseling (meaning and definition)
   2. Needs & role of guidance and counseling in school
   3. Forms of guidance (Education and Career)
   4. Need and importance of counseling in schools

VIII. Curriculum, Syllabus and Textbook
   1. Meaning and definition of curriculum
   2. Differences between curriculum, syllabus and textbooks
   3. Components of curriculum
   4. Importance of Assessment and evaluation
REDUCED SYLLABUS
OUTLINES OF HOME ECONOMICS-XI

Home Management:

1. Values and goals & standards as related to management in the home; discussion of some values and goal as observed by Pakistani families; importance of developing goals as a means of realizing values

2. Resources: human and materials:
   b. Energy management-ways of avoiding fatigue
   c. Simplifications

3. a. Types of income
   b. Budgeting and its advantages
   c. Account keeping

5. Family Housing:
   a. First Aid elementary
   b. i. Storage of summer and winter clotes and house hold equipment
   ii. Storage of food stuff (perishable and non-perishable foods)
   iii. Storage of books, shoes and extra furniture and other house hold equipment

Child Development:

6. Basic human needs, physical and psychological
   a. Principles of growth and development from birth to 5 years
   c. Understanding and guiding children: Characteristics of the toddler and the pre-school age child (development tasks), understanding and dealing with children problems such as fear, anger, jealousy, bed wetting and thumb sucking
# REDUCED SYLLABUS
## FINE ARTS HSSC-I
### With General Outline

<table>
<thead>
<tr>
<th>Chapters</th>
<th>Points to be discussed Generally</th>
<th>Contents to be focused on:</th>
</tr>
</thead>
</table>
| Prehistoric Art | - General introduction to Term "Prehistoric" initial phase of diverse cultures.  
- Concept of B.C.E and C.E.  
- Paleolithic age, Mesolithic age, Neolithic age  
- Share the world map with the students indicating the primitive art; cave paintings, sculpture and structures. Give special reference of Potohar and Baluchistan in Pakistan. | ✓ Hall of Bulls (painting)  
✓ Venus of Willendorf (sculpture)  
✓ Stone Henge (Architecture)  
(discuss in detail time line, Area, tools used, material and technique of above mentioned) |
| Egyptian civilization | - Introduction to Egyptian Civilization  
- Timeline, Geographical conditions, economic conditions, social set up, religious beliefs  
- Burial system (Mastaba and Pyramids)  
- Hieroglyphs and murals in tombs  
- Book of death with reference to the religious and artistic practices, a brief introduction. | ✓ Great Pyramid of Khufu  
✓ Rameses II (seated sculpture of Rameses at temple of Abu Simbel)  
✓ Narmer palette 3000 B.C.  
✓ Fowling scene from the tomb of Nebamun, Thebes, Egypt  
(discuss the time line, area, plan, influences, symbolism, material and technique with special reference to the decorative aspect of the above mentioned) |
| Indus Valley Art 4000-1800 B.C. Mohenjo-Daro & Harappa | - Mehrgarh, the pre-Indus period civilization  
- Introduction to Indus valley civilization. Important cities; Mohenjo-Daro and Harappa  
- Timeline, Geographical conditions, economic conditions, social set up, religious beliefs,  
- Trade links with Mesopotamia and Egypt  
- Exploring, establishing and identifying the relationship of the Indus art and present | ✓ Great Bath  
✓ Seals  
  - Unicorn seal  
  - Bull seal  
  - Yogi seal  
✓ King Priest  
✓ Dancing Girl  
(discuss in detail time line, area, plan, influences, symbolism, material and technique and decorative aspects of the above mentioned) |
### Buddhist Art
- Introduction to Mauryan Empire 321-233 B.C.
- Difference in treatment of Buddha's image in Hinayana and Mahayana sects
- Significance of Ajanta Caves
- Comprehension of the symbolism of Bodhisattva, Buddha, Mudras, Stupa and Ashokan Pillars
- The great stupa of Sanchi 3rd Century B.C.E
- Takht-e- Bahi Monastery Gandhara and Kushan schools 1st-3rd century A.D.
- Ajanta Caves
  - Buddha with Blue Lotus
  - Composition with White elephant

*(discuss in detail time line, Area, plan, influences, symbolism, subject matter, materials, techniques, and decorative aspects of the above mentioned)*

### Classical Art
#### Greek Civilization
- Introduction to Greek civilization
- General outline of architectural achievements of Greeks
- Knowledge of the standardized proportions established in Greek period in art and architecture
- Timeline, Geographical conditions, economic conditions, social set up, religious beliefs
- Disco boles by Myron (Roman copy)
- Parthenon (also introduce Greek orders)
- Theater (Epidaurus, Greece)

*(discuss in detail time line, Area, plan, influences, symbolism, subject matter, materials, techniques and decorative aspects of the above mentioned)*

#### Roman Civilization
- Introduction to Roman civilization
- Architectural achievements of Romans.
- Timeline, Geographical condition, geological condition, social set up, religious beliefs
- Portrait of Augustus as general from Primaporta, Italy; early 1st century of a bronze original of 20 BCE, marble, Rome.
- Colosseum, Rome, Italy, 70-80 BCE (also introduce roman order of architecture)

*(discuss in detail time line, Area, plan, influences, symbolism, subject matter, materials, techniques and decorative aspects of the above mentioned)*
FINE ARTS I
STUDIO WORK:

Details of Portfolio (End of Year’s work) Max Marks: 50

2D FINE ARTS

Drawing / Painting
- Still Life 6
- Landscape 4
- Nature Study 3

Technique: as Per requirement
Medium: paper, lead and Colour pencil, Markers, Pen and Ink, water colours, Poster Colours, Gouache

Time line

Colour Wheel (12 divisions) 1
Gradation Chart 1

Art of Lettering (Calligraphy)
- English 1 in any style
- Urdu 1 in any Style

Technique: Exploring the Nib
Medium: Pen and Ink

Letter Head and Logo/ monogram
- Letter Head 1
- Logo 1

Technique: as Per requirement
Medium: As per choice

Repeat Pattern
- Repeat patterns 12

Technique: as Per requirement
Medium: Poster Colour, Gouache

Surface Embellishment
- Surface Embellishment 2
  (on any surface e.g. Pots, Book jackets etc.)

Technique: as Per requirement
Medium: paper, lead and Colour pencil, Markers, Pen and Ink, collage

Computer Arts
- Computer Arts* (Posters, Cards, Illustrations) 2 (Size A4, Hard copy)
  *Clipart and other soft wares for compositional awareness

Technique: Computer Arts
Medium: Computer

Photography
(Images collected for the compositional awareness and study of various light modes)
Technique: Any available camera 2 (minimum size: postcard)

3D APPLIED ARTS
Paper Sculpture
- Origami 1
- Papier Mache 1
Technique: Constructive/ Additive; paper Folding, Paper moulding
Material: Paper
The sculptures should not be smaller than 6 square inches

Note:
- It is desired that student selects the best work for the portfolio and exhibit in presentable manner.
- The works be duly signed, dated and stamped by the Art teacher.
- The works reflect the knowledge and understanding of elements of Visual Art and principles of design.
- Plagiarism should be vigilantly checked by the Art teacher. No copied work shall be accepted as part of Portfolio.
I. Introduction to Psychology
1. Introduction Meaning and Definition of psychology as science of Behavior and mental processes
2. Goals of psychology
3. Clinical psychology
5. Educational Psychology
6. Environmental psychology
8. Business Psychology

II. Methods of Research
1. Meaning and significance of research
2. Types of Research:
   i. Observation Method
   ii. Experimental Method
   iv. Case – study Method. Advantages

III. Nervous System and Behaviour
1. Meaning & relationship with behaviour
2. Neuron
3. Structure and Function of main parts of Brain

IV. Sensation and Perception
1. Brief introduction of sensation
2. Anatomy of the Eye
3. Anatomy of Ear
   Gestalt laws of perceptual organization.
     1. Depth & Distance.

V. Learning and Remembering
1. Definition of learning
2. Basic Principles of learning
3. i. Conditioning  ii. Classical  iii. Operant
4. Definition of Memory
   i. Sensory, Memory  ii. Short-term Memory
   iii. Long-term Memory
5. Measuring Memory
   i. Recognitions Method
   ii. Recall Method
   iii. Saving Method
   iv. Method of Rearrangement
VI. Motivational Behaviour
1. Definition
2. How they direct our Behavior
3. Primary motives (unlearned/Physiological)
4. Hunger, thirst, temperature, Sex, Maternal
11. Elements affecting Motivation

VII. Personality
1. Definition
   i. Introvert, Extrovert & Ambivert
   ii. Freudian theory
3. Objective types:
   i. Questionnaire, Interview
   ii. MMPI
   iii. Projective techniques
   vi. TAT, Rorschach Inkblot

VIII. Emotional Behaviour
1. Meaning and definition
3. James-Lange theory (Feelings are physical)
4. Cannon – bard theory (Feelings are cognitive)
5. Role of Learning and Environment in emotion

IX. Higher Cognitive Process
1. Meaning & definition of cognition
2. Intelligence, General or specific Abilities
4. Stanford-Binate intelligence Scale, WAIS, WISE Army Alpha and Beta Intelligence
6. Cognitive operations in problem solving
   i. Discussion
   ii. Brain Storming
   iii. Cooperative Learning
I. Civics – what is it?
1. Definition
2. Nature
3. Significance
4. Utility

II. Civics – The Basic Concern
1. The harmonic relationship between the members of society e.g. child hold, socialization, gender, religion.
2. Individual as a member of state.
3. Family a basic social institution.
4. Nature & Significance of community
5. Society
6. Nation and Nationality & Muslim Ummah

III. State
1. Definition
2. Elements
3. Distinction of state from Government
4. Society
5. Nation
7. Welfare State and equity issues with reference to gender, religion, age & social classes.

IV. Sovereignty
1. Definition
2. Salient features
3. Forms Manifestation of Sovereignty
4. Basic principles of Sovereignty in Islam.

V. Government
1. Meeting
2. Democracy
3. Parliamentary
4. Presidential
6. Legislature
7. Executive
8. Judiciary
9. Definition
10. The role of Good Governance in Islamic Democratic Government

VI. Law and Related Matters
1. Meetings Law
2. Sources
3. Kinds
4. Meaning
5. Sources
6. Objectives Meaning of Law
VII. Citizen and Citizenship
1. Definition
2. Qualities of good citizenship
3. How citizenship acquired and lost?
4. Definition
5. Rights and responsibilities of a citizen in Islamic perspective

VIII. Constitution
1. Definition of constitution
2. Kinds of constitutions
3. Characteristics of a good constitution

IX. Political Dynamics
1. Meeting
2. Formulation
3. Agencies
4. Conditions for sounds public opinion
REDUCED SYLLABUS
SOCIOLOGY-XI

I. Introduction of Sociology
1. Definition
2. Subject matter
5. What Science is!
6. Sociology as a Science
8. Role of Sociologists in the society

II. Social Action and Social Interaction
1. Definition of Social Action
2. Essentials of Social Action
3. Importance of studying Social Action
4. Definition of Social Interaction
5. Essentials of Social interaction
6. Importance of Studying Social Interaction
7. Distinction between social action and social interaction

III. Social Group and Social Processes
1. Definition
2. Significance
3. Types as below:
   i. Primary and Secondary Groups,
   ii. Formal and Informal Groups,
4. Definition and forms of social processes:
   - Cooperation
   - Competition,
   - Conflict,
   - Accommodation,
   - Assimilation

IV. Social Stratification
1. Meaning
2. Determinants
5. Merits and demerits
6. Meaning
7. Class – economic distribution
9. Horizontal and vertical Social Mobility

V. Social Norms Status and Role
1. Meaning
2. Significance
3. Folk Ways
4. Mores
5. Laws
8. Meaning of Status and Role
9. Types of Status – achieved and ascribed

VI. Values and Belief
   1. Definition of values and belief

VII. Society
   1. Definition
   2. Elements
   3. Significance
   4. Rural and Urban Society

VIII. Culture and Civilization
   1. Meaning of culture and civilization
   2. Significance of culture and civilization
   3. Uniformities and variabilities of culture

IX. Social Institution
   1. Meaning
   2. Significance
   3. Family
   4. Education
   5. Religion
   6. Polity
   7. Economy
   8. Recreation
REDUCED SYLLABUS
LIBRARY SCIENCE-XI

History of the Book and Libraries
1. Definition and history of Libraries Ancient time
2. Role of Modern libraries in:
   a. Education and research
   b. Science and Industry
3. Purpose and functions of various kinds of libraries
   a. Academic (School and College Libraries)
   b. National
   c. Public
   d. Special (govt. Industry and special subject libraries)
4. Art of book-binding:
   c. Chemicals used for the preservation of library materials
5. Documentation of library materials
   a. Books:
      i. Cataloguing
      ii. Indexing
      iii. Bibliography
   b. Non-Book Materials:
      i. Journals
      ii. Newspapers
      iii. Maps and charts
      iv. Microfilms, Microfish, Microcards etc
      v. Tapes, discs etc
6. Use of books and libraries and reader services:
   a. Formation of materials i.e. title paging, contents, foot notes, references, indexes and bibliography
   c. Compilation of Bibliography and indexing
REDUCED SYLLABUS
CIVICS
(For Non-Muslims)
(In lieu of Islamic Education)

The outline of course contains the following major themes and their contents:

I. Man and Society
   a. Sociability of man
   b. Survival and development
   c. Impact of social environment on man
   d. Process of socialization
   e. Nature of Associations, their kinds (Voluntary/Compulsory) and functions
   f. Concept of Family, Nation, Millat and State
   g. Interdependence of the Individual and Society

II. Individual and State
   a. Meaning of State and its elements (Population, Territory, Government and Sovereignty)
   b. Islamic concept of State
   c. Functions of State (Defence, Law and Order, Welfare etc)
   d. Organs of government Legislature, Executive and Judiciary
   e. Forms of Government
   f. Law, Liberty and Equality

IV. Citizenship
   d. Qualities of good citizenship
   e. Rights and Duties of citizen in a State
   f. Fundamental Human Rights

V. Rights and Duties of a Citizen in Pakistan
   a. Rights and Duties of citizen in Islamic State with special reference to Khutba-e-Hujjat-ul-Wida
   c. Rights and Duties of non-Muslims in Pakistan under the constitution
REDUCED SYLLABUS
PAKISTAN CULTURE-XI

I. Culture
   A. Meaning, elements and scope
   B. Concept of Islamic Culture

II. Pakistan: The land and the people
   A. The Land
      The Mountainous Zone: External Security and Cultural inflow; Northern Ranges and Southern Mountains
      Arid Zones: Pastoral and Nomadic Life: The Plateaus and the Deserts, the Coastline: Maritime Links
   B. The People
      Racial Mix-Regional Traits, The Tribal System, Religious Groups, Occupational Groups, Urban-Rural Communities

III. The Making of Pakistan
   B. The Arab Period: Foundation of Islamic Society
   D. Socio-Political Decline: Socio-Economic Set-backs
   E. The Beginning of Muslim Resurgence: Steps towards Socio-Economic Uplift, Struggle for Homeland, Sayyid Ahmad Khan, Muhammad Ali Jinnah (Quaid-i-Azam), The Birth of Pakistan

IV. Pakistan Culture
   A. Ideological Moorings (Islam): The Holy Quran and the Prophet Oneness of Allah- Tuahid, Prophethood-Risalat Knowledge-Ilm, Deeds-Amal, the Hereafter-Akhrat
   B. Social Patterns: Tribal, Feudal, Rural and Urban
   C. Education

V. Emerging Trends
   New Orientations, Islamization, Education, Literature, Socio-Economic Trends
REduced Syllabus
Principles of Accounting

1. Definition, basic concepts, Double Entry System of Book? Deeping, its objectives and advantages
2. Accounting Cycle: Accounting equation Journal, Ledger and Trial Balance
3. Cash Book
4. Banking Transactions: Kinds of bank accounts and procedure of recording of banking transactions; cheques; cheque register; bank reconciliation statement, its objectives and preparation (Exclude revised cash book and double column cash book)
5. Rectification of Errors: Kinds of error-correction of errors after and before closing the books of accounts
7. Adjustments and Closing Process: Prepaid and outstanding expenses; Accrued and unearned income; provision for Bad Doubtful Debt; Provisions for Discount; Depreciation, interest on capital and drawing

List of equipment, Lab-requirements
Book Keeping machines, Overhead Projectors, Slide Projector, Scientific electric calculators, Amount perforator on Cheque, Bank Draft, Business film through T.V.
What is Economics about?

a. The nature, (Definitions) and Methods of Economic Analysis

1. Demand and Supply:
   a. Law of demand, Changes in demand, Elasticity of demand, Measurement of elasticity of demand (outlay method)
   b. Supply vs Stock, Law of supply
   c. Equilibrium between demand and supply
   d. Effects of changes in demand and/or supply on market equilibrium

2. Consumer Demand Theory:
   Law of Diminishing Marginal utility (cardinal approach)

3. The Cost and Revenue of a Firm:
   Classification of cost: Fixed Cost, Variable Cost, Total Average Cost, Marginal Cost
   (Concepts and Graphical Representation)
   Total Revenue, Marginal and Average Revenue (Concepts and Graphical Representation)

4. Laws of Returns: (Law of Variable Proportions)

5. Price and Output Determination:
   Concept of Perfect Competition, Price and Output determination under-Perfect Competition

6. Resource Pricing:
   b. Factors of Production (brief introduction)
      (i) Land and its Characteristics
      (ii) Labour and its Characteristics
      (iii) Capital and its Importance
      (iv) Organization and its Forms (introduction)
MACRO ECONOMICS

1. National Income
   Measurement of National Income:
   a. National Income at factor Price
   b. National Income at Market Price
   c. Expenditure approach to income measurement
   d. Concept of National Income
      i. GNP = Gross National Product
      ii. GDP = Gross Domestic Product
      iii. NNP = Net National Product
      iv. NI = National Income
      v. PI = Personal Income
      vi. DPI = Disposable Personal Income
      vii. PCI = Per-Capita Income

2. Money
   a. Money (Definition)
   b. Functions of money
   c. Inflation and its effects

3. Business Cycle
   a. Phases of Business Cycle

4. International Trade
   a. Introduction to International Trade
   b. Balance of Trade and Balance of Payment

5. Public Finance
   a. Cannons of Taxation
   b. Zakat and Ushr
REDUCED SYLLABUS
PRINCIPLES OF COMMERCE

1. Introduction
   Definition of Commerce, its importance and scope. Branches of commerce, Trade, Insurance, Finance, Marketing, Warehousing and Industry, Essentials of establishing a business house and qualities of a good businessman

2. Types of Commercial Organizations
   a. Sole Proprietorship:
      Definition, Features, merits and demerits
   b. Partnership:
      Formation Features, Partnership Agreement/Deed Advantages, Disadvantages and Dissolution
   c. Joint Stock Company/Corporation:
      Special Feature, Kinds, Formation; Memorandum of Association, Articles of Association, Certificate of Registration, Prospectus, Certificate of Commencement of Business, management: share holders, Directors and Managing Director, Winding up
   d. Cooperative Society:
      Features, kinds, advantages and disadvantages; Basic concepts of Musharqa, Mudarba

4. Trade
   Kinds:
   a. Home Trade:
      Whole sale, Retails, Middlemen
   b. Foreign Trade
      Import:
      Import procedure, documents used
      Export:
      Export procedure, documents used and role of Export Promotion Bureau
REDUCED SYLLABUS
BUSINESS MATHEMATICS

1. Business Arithmetic:
   a. Ratios and Proportion
   b. Percentage
   c. Discount
   d. Commission
   e. Profit and Loss

2. Interest
   a. Simple Interest
   b. Compound Interest

3. Equations
   a. Linear Equations
   b. Quadratic Equations (Factorization and quadratic formula)
   c. Simultaneous Equations

   Equations reducible to quadratic equations are excluded.

4. Matrices and Determinants
## REDUCED SYLLABUS
### ENGLISH COMPULSORY HSSC-II

<table>
<thead>
<tr>
<th>No</th>
<th>Units &amp; Sub-units Included</th>
<th>Sub-units Excluded</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td><strong>Vision and Mission</strong></td>
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<tr>
<td>1.1</td>
<td>The Farewell Sermon</td>
<td>1.3 The Blades of Grass (Poem)</td>
</tr>
<tr>
<td>1.2</td>
<td>Jinnah’s Vision of Pakistan</td>
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<tr>
<td>1.4</td>
<td>Parts of Speech</td>
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<td>1.5</td>
<td>Nouns Phrases</td>
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<tr>
<td>1.6</td>
<td>Noun Clauses</td>
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<td>2.</td>
<td><strong>Hope and Aspiration</strong></td>
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<tr>
<td>2.1</td>
<td>I have a Dream!</td>
<td>2.2 Glory and Hope</td>
</tr>
<tr>
<td>2.3</td>
<td>I Dream a World (Poem)</td>
<td>2.6 Pronoun-antecedent agreement Articles</td>
</tr>
<tr>
<td>2.4</td>
<td>Pronouns</td>
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<tr>
<td>2.5</td>
<td>Relative Pronouns</td>
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<tr>
<td>3.</td>
<td><strong>Duty and Responsibility</strong></td>
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<tr>
<td>3.2</td>
<td>Lingkuan Gorge</td>
<td>3.1 Lesson from the Battle of Uhud</td>
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<tr>
<td>3.3</td>
<td>If (Poem)</td>
<td>3.4 Tenses</td>
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<tr>
<td>3.5</td>
<td>Verbs/Modals</td>
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<tr>
<td>3.6</td>
<td>Transitive, Intransitive</td>
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<tr>
<td>4.</td>
<td><strong>Courage and Determination</strong></td>
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<tr>
<td>4.1</td>
<td>Determination</td>
<td>4.2 The Man who Planted Trees</td>
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<tr>
<td>4.3</td>
<td>It couldn’t be done (Poem)</td>
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<tr>
<td>4.4</td>
<td>Adjectives</td>
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<tr>
<td>4.5</td>
<td>Adjective Phrases</td>
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<td>4.6</td>
<td>Adjective Clauses</td>
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<tr>
<td>5.</td>
<td><strong>Technology/Gender Inequality</strong></td>
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<tr>
<td>5.2</td>
<td>Gender inequality is detrimental to society</td>
<td>5.1 Technology and society of the future</td>
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<tr>
<td>5.3</td>
<td>The school boys (Poem)</td>
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<tr>
<td>5.4</td>
<td>Adverbs, Phrases, Clauses</td>
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<tr>
<td>5.5</td>
<td>Prepositions</td>
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<td>5.6</td>
<td>Prepositional Phrases</td>
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<tr>
<td>6.</td>
<td><strong>Cultural Heritage/The Past and The Present</strong></td>
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<tr>
<td>6.1</td>
<td>Archaeological treasures of Pakistan</td>
<td>6.2 The Renaissance</td>
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<tr>
<td>6.3</td>
<td>Once Upon A Time (Poem)</td>
<td>6.5 Narration</td>
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<tr>
<td>6.4</td>
<td>Figures of Speech</td>
<td>6.6 Voice</td>
</tr>
<tr>
<td>7.</td>
<td><strong>Tales from Shakespeare</strong></td>
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<tr>
<td>7.1</td>
<td>The Merchant of Venice</td>
<td>7.2 King Lear</td>
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<tr>
<td>7.4</td>
<td>Essay Writing</td>
<td>7.3 Paragraph Writing</td>
</tr>
<tr>
<td>7.5</td>
<td>Intonations</td>
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</tbody>
</table>

**NOTE:** The inclusion & exclusion of units encompass the relevant exercises also.
REduced syllabus
English Elective-XII

Section “A” Functional English
NOTE: There will be no change in the following fields:
1. Any essay of relatively advance nature
2. Precis writing and comprehension of an advance English passage

1. An essay of relatively advanced nature
2. Precis writing of fairly advanced English passage followed by comprehension question

Section “B” Text
3. Play: Merchant of Venice by William Shakespeare
   The following areas have been excluded:
   Act-II, Scene-II, IV, VI, VIII
   Act-III, Scene-I, II
4. Novel: Mayor of CasterBridge by Thomas Hardy
   The following chapters have been excluded:
   V, IX, XI, XVI, XVII, XX, XXIII, XXIV, XXVII, XXIX, XXXII

NOTE: There will be no questions on the above mentioned chapters. It is expected that a brief summary of these chapters will be furnished to the students to maintain flow and sequence of events and characterization.

5. Grammar: (Synthesis/Idioms)
<table>
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<tr>
<th>مصنف</th>
<th>شم عناوان</th>
<th>ما</th>
<th>ر</th>
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<tbody>
<tr>
<td>خواجه حسن نقشبندی</td>
<td>شبلی نعمانی</td>
<td>3</td>
<td>فاقد، مین روزہ نظامی</td>
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<td>لکیز روڈ روزر</td>
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<td>احمد</td>
<td>8</td>
<td>سعید حسن منتشر کتبی</td>
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<td>فرحت اللہ بیگ</td>
<td>13</td>
<td>ایک وصیت کی تعلیم</td>
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<td>پرنس بخاری</td>
<td>16</td>
<td>مریم پورا پیر</td>
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| حصہ نظر: |
|------------|-------|
| شاعر | شم عناوان | ما | ر |
| جووش ملیح | مناظر سنہر | 3 | علامہ اقبال | 1 |
| ابادی | ن. م. راشد | 6 | نفیر عمل | 5 |
| مجید امجی | ستر ے | 7 | بیضہ دیر کر دینا | بون |

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<td>حضرت سید</td>
<td>مولانا عثمان</td>
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اتباع کتاب: غزل نانیہ، استحوار، کتابیں مولانا عثمان، مولانا عثمان، مولانا عثمان، مولانا عثمان
اسلاميات اختياري باروين جماعة کے لیے

الف. القرآن الحكیم: سورة البقرة سے پندرہ رکوع تک ب. الحدیث: اکیس سے پندرہ

احادیث تک

ج. اسلامی تنظیم و تمدن

د. فقہ اسلامی کے مختلف مسائل (أنہ کرام کے حالات زندگی)

ضمیمہ پرچہ دو

الف. القرآن الحكیم (سورة البقرة)

۴. اعجاز قرآن

ب. الحدیث

۱. کتب حدیث (صحاح ستہ)

اربعین امام تودی فقط ترجمہ

ج. اسلامی تنظیم و تمدن: کتاب و سنت کی روشنی میں درج ذیل عنوانات ہے مطالعہ:

۱. فرد: درج ذیل اخلاق اسلامی کا مطالعہ:
    - 1. تقیر
    - 2. عدل
    - 3. خدمت خلق

۲. خاندان: 1. عائلی زندگی
    - والدین اور اولاد کے حقوق و فرآئض

۳. اسلامی معاشرہ:
    - 1. ریاست کی حقوق و فرآئض
    - 2. استاد و شاگرد کے حقوق و فرآئض

۴. عالم اسلام:
    - 1. تبلیغ
    - 2. جہاد

د. فقہ اسلامی کے مختلف مسائل (أنہ کرام کے حالات زندگی)

۱. حضرت امام ابوحنیفہ
۲. حضرت امام مالک
۳. حضرت امام.geom صادق
۴. حضرت امام زید بن علی
REDUCED SYLLABUS
ISLAMIC HISTORY-XII

Option – I  Umayyad and Abbasids
Option – II  Umayyad and Muslims in Spain
(The students will have to opt only one option)

I. Umayyad
1. Hazrat Ameer Maawia
2. Abdul Malik bin Marwan
3. Waleed bin Abdul Malik
4. Hazrat Umer bin Abdul Aziz
5. Marwan-II and Abbasid Movement
6. Downfall of Umayyad and its Central Government Administration

II. Abbasids
1. Abul Abbas Al-Saffah
2. Abu Jaffar Mansoor
3. Haroon ur Rasheed
4. Ma’amoonur Rasheed
5. Mutawakil Alilahh
6. Crusades
7. Mongols
8. Downfall of Banu Abbas

III. Muslims in Spain
1. Abdul Rehman Al-Dakhil
2. Hasham-I
3. Hakam-I
4. Abdul Rehman Al-Nasir
5. Hakam-II
6. Marabteen
7. Mawahideen
8. Last Muslim Government in Granada
9. Culture of Muslims in Spain
REDUCED SYLLABUS
HISTORY OF PAKISTAN-XII

I. Estimation of the Historical Experiences between 1972 – 1979
   1. Simla Agreement
   2. Constitution of 1973 Salient Features
      i. Islamic Provisions
   3. Rigging in 1977 elections

II. Historical Occurrence between 1979 – 89 in Socio-Political Backgrounds
   1. Proclamation of Martial Law 1979 and dissolving PPP government
   2. Islamization process
   3. Constitutional Amendments
   4. Non-parties elections of 1985 and aftermath

III. The Arena of History during 1989 – 2001
   1. Elected government her dissolution – general causes and effects
   2. End of Nawaz Sharif’s last era 1999 – dramatic collapse
   3. The major plans of new government
   4. Devolution of power plan
   5. 11 September 2001 incident

IV. Pakistan’s Foreign Affairs
   1. Changing pattern of Pakistan’s foreign policy during the period 1972 – 2000
   2. September 11 episode and sudden diversion of foreign policy with reference to Afghanistan
   3. Indian State terrorism in Kashmir
REDUCED SYLLABUS
PHYSICS-XII

11. ELECTROSTATICS
11.4 Electric flux
11.5 Gauss’ Law and its Application
11.6 Electric Potential
11.7 Electric Potential Energy and Potential due to point charge
11.8 Field and Potential Gradient
11.9 Electron volt
11.10 Capacitors
11.11 Electric Polarization
11.12 Energy stored in a capacitor
11.13 Charging and discharging of a capacitor

12. CURRENT ELECTRICITY
12.10 Thermistor
12.12 Internal Resistance of a supply
12.13 Electric power
12.14 Maximum power output
12.15 Thermocouple
12.16 Resistance Thermometers
12.17 Kirchhoff’s Law
12.18 Wheatstone Bridge

13. ELECTROMAGNETISM
13.2 Force on a current carrying conductor
13.3 Magnetic Flux
13.4 Ampere’s Law
13.5 Magnetic field due to a current carrying Solenoid (Applications are excluded)
13.6 Motion of a charged particle in a uniform magnetic field
13.7 Torque on a current carrying loop / coil
13.8 Galvanometer (lamp scale method and pivoted coil galvanometer are excluded
13.9 Conversion of Galvanometer into Ammeter
13.10 Conversion of Galvanometer into Voltmeter
13.11 Avometer: Multimeter

14. ELECTROMAGNETIC INDUCTION
14.2 Faraday Law of Electromagnetic Induction
14.3 Lenz’s Law
14.4 Induced EMF
14.4.3.3 Eddy currents
14.5 Generating Electricity
14.6 AC Motor
15. **AC CIRCUITS**
   15.1 Alternating Voltage and Current
   15.2 Sinusoidal Alternating Voltage and Current
   15.3 AC Terminologies
   15.4 Values of Alternating voltage and Current
   15.5 RMS value of Sinusoidal Current
   15.6 Phase of AC
   15.7 AC through Resistance
   15.8 AC through pure inductance
   15.9 AC through Capacitance

16. **PHYSICS OF SOLIDS**
   16.5 Energy Band Theory
   16.6 Super Conductors

17. **ELECTRONICS**
   17.5 Rectification
   17.6 Transistor
   17.7 Types of Configuration

18. **DAWN OF MODERN PHYSICS**
   18.1 Reference Frames
   18.2 Special Theory of Relativity
   18.3 Consequences of Special Theory of Relativity
   18.4 Black Body Radiation
   18.5 Photoelectric Effect
   18.6 Compton Effect
   18.7 Pair Production
   18.8 Pair Annihilation
   18.9 Wave Nature of Particles (18.9.1 excluded)
   18.11 Uncertainty Principle

19. **ATOMIC SPECTRA**
   19.7.2 Production of X-Rays
   19.8 Lasers

20. **NUCLEAR PHYSICS**
   20.5 Mass Defect and Binding Energy
   20.9 Interaction of Radiation with Matter
   20.18 Basic Forces of Nature
   20.19 Building Blocks of Matter

**NOTE:** All MCQs, short questions and problems relevant to the abovementioned topics are included.
1. Measure length and diameter of a solid cylinder and hence estimate its volume quoting proper number of significant figures using Vernier callipers.
2. Measure the diameters of a few ball bearings of different sizes using Screw Gauge and estimate their volumes. Mention the uncertainty in each result.
3. Verify the two conditions of equilibrium using a suspended metre rod.
4. Determine the moment of inertia of a fly wheel.
5. Verify that the time period of the simple pendulum is directly proportional to the square root of its length and hence find the value of ‘g’ from the graph.
6. Determine time constant by charging and discharging a capacitor through a resistor.
7. Determine resistance of wire by slide Wire Bridge.
8. Analyse the variation of resistance of thermistor with temperature.
10. Determine emf of a cell using potentiometer.
11. Investigate the relationship between current passing through a tungsten filament lamp and the potential applied across it.
12. Draw characteristics of semiconductor diode and calculate forward and reverse current resistances.
REDUCED SYLLABUS
BIOLOGY HSSC-II

NOTE:
1. Only topic based relevant MCQs, Short and Long Questions are included.
2. All information in side boxes is excluded.

14. RESPIRATION
   14.1 Properties of Respiratory surfaces
   14.2 Respiratory System of Man
      14.1.1 Air Passage Way and Lungs
      14.1.2 Mechanism of Breathing
      14.1.4 Transport of Gases (Transport of Oxygen and Carbon dioxide)

15. HOMEOSTASIS
   15.2 Excretion
      15.2.1 Relationship between Excretory Products and Habitat
   15.3 Excretory System of Man
      15.3.1 Structure and Function of Kidney
   15.4 Disorders of Urinary Tract
      15.4.1 Urinary Tract Infections
      15.4.2 Kidney Stones (Causes and Treatments)

16. SUPPORT AND MOVEMENT
   16.1 Human Skeleton (Axial Skeleton, Appendicular Skeleton, Types of Joints)
   16.3 Muscles (Smooth Muscles, Cardiac Muscles and Skeletal Muscles)
      16.3.1 Ultra-structure of Skeletal Muscles
      16.3.3 Muscle Contraction - Sliding Filament Model

17. NERVOUS COORDINATION
   17.1 Neurons
   17.2 Nerve Impulse
      (Velocities of nerve Impulse excluded)
   17.3 Synapse
   17.4 Basic Organization of human nervous system (CNS and PNS)
      (Sensory receptor and their working excluded)

18. CHEMICAL COORDINATION
   18.1 Hormones- The chemical messengers
   18.2 Endocrine System of Man (Glands with location, secretions and imbalance)
      18.2.1 Pituitary gland and the Role of Hypothalamus
      18.2.2 Thyroid
      18.2.3 Parathyroid
      18.2.4 Pancreas
      18.2.5 Adrenal
      18.2.6 Gonads
      18.2.7 Other Endocrine Tissues / Cells
   18.3 Feedback Mechanism

20. REPRODUCTION
   20.1 Reproductive System of Man
      20.1.1 Male Reproductive System and its Hormonal Regulation
      20.1.2 Female Reproductive System and its Hormonal Regulation
   20.2 Disorders of Reproductive System
21. DEVELOPMENT AND AGING
   21.1 Embryonic Development (Cleavage, Gastrulation, Neurulation)
   21.3 Human Embryonic Development

22. INHERITANCE
   22.4 Polygenic Inheritance and Epistasis
   22.6 Sex Determination
   22.7 Sex linkage

23. CHROMOSOME AND DNA
   23.2 DNA as the Hereditary Material
   23.3 DNA Replication
      23.3.1 Meselson and Stahl Experiment
      23.3.2 Mechanism of DNA Replication
   23.4 Gene Expression
   23.6 Mutations

25. MAN AND HIS ENVIRONMENT
   25.1 Biogeochemical cycle
   25.3 Ecological Succession

26. BIOTECHNOLOGY
   26.1 Cloning of gene
   26.2 DNA Sequencing
      (26.2.4 Automatic DNA Sequencing excluded)
   26.5 Tissue Culture
   26.6 Transgenic Bacteria, Plants & Animals
   26.7 Biotechnology & Healthcare
   26.8 Scope & Importance of Biotechnology
REDUCED LIST OF PRACTICALS
BIOLOGY HSSC (2006 NBF)

1. Preparation and examination of the slides of animal and plant cells using differential staining
2. Performing Benedict’s test for reducing sugars and confirmation of the presence of starch through iodine test
3. Confirmation of the presence of proteins through Biuret test
4. Confirmation of the presence of lipids through Emulsion test
5. Extraction of the leaf pigments and their separation by paper chromatography
6. Study of Nostoc from fresh or preserved material
7. Observation and drawing of representative members of each group of protists
8. Observation and drawing labeled diagrams of the life cycle of black bread mold from fresh culture and prepared slides.
9. Identification of the vegetative and reproductive structures of *Funaria* by examining the fresh or preserved material
10. Identification of the vegetative and reproductive structures of a local fern and relate them with the concerned life cycle
11. Classifying the given invertebrates into phyla and given chordates into classes by using classification key
12. Demonstration of phototropism, geotropism and thigmotropism in plants
13. Differentiation of an artery and a vein by observing prepared slides
14. Recognizing phagocytes and lymphocytes while observing prepared slides
15. Identification of different parts of the respiratory and reproductive system of a dissected frog (dissection would be done by the teacher)
17. Identification of the different stages in chick development through observation of prepared slides (48 hours and 72 hours).
18. Calculation of probability by using the dice to calculate how many times out of 100 throws can students get sixes
19. Data collection from the class to see how many individuals have AB blood group and construction of a pie chart and histogram for the collected data
20. Testing of blood group using Antisera and performing agglutination reaction for Rh factor
13. s-ANDp-BLOCK ELEMENTS

13.2 Group 1-Elements
   13.2.1 Atomic and Physical Properties
      13.2.1.1 Trends in Atomic Radius
      13.2.1.2 Trends in First Ionization Energy
      13.2.1.3 Trends in Electronegativity
      13.2.1.4 Trends in Melting and Boiling Points
      13.2.1.5 Trends in Density
   13.2.2 Trends in Reactivity with Water
   13.2.3 Reactions with Oxygen
      ReactionsofOxideswithWaterandDiluteAcids
   13.2.4 Reactions with Chlorine
   13.2.5 Effect of Heating Nitrates, Carbonates.
   13.2.6 Flame Tests: Origin of Flame Colors

13.3 Group 2-Elements
   13.3.1 Atomic and Physical Properties
      1. Trends in Atomic Radius
      2. Trends in First Ionization Energy
      3. Trends in Electronegativity
   13.3.2 Trends in Reactivity with Water
   13.3.3 Reactions with Oxygen and Nitrogen
      1. Reactions of group II elements with air or oxygen
      2. Reactions of group II elements with nitrogen
   13.3.4 Trends in Solubility of the Hydroxides, Sulphate and Carbonates
   13.3.5 Trends in Thermal Stability of the Nitrates and Carbonates
   13.3.6 How Beryllium Differs from other Members of its Group?

13.4 Group 4–Elements
   13.4.1 Physical Properties: Melting and Boiling Points
   13.4.2 The Trend from Non-Metal to Metal
   13.4.3 Oxidation State
   13.4.4 Possible Oxidation States
      13.4.4.1 Inert Pair Effect and positive oxidation states
      13.4.4.2 Inert Pair Effect and negative oxidation states
   13.4.5 Chlorides of Carbon, Silicon and Lead
      13.4.5.1 Stability
      13.4.5.2 Reactions with Water
   13.4.6 Oxides
      13.4.6.1 Structure of Carbon Dioxide and Silicon Dioxide
      13.4.6.2 Acid Base Behavior of Group IV Oxides

13.5 Group 7-Elements: Halogens
   13.5.1 Atomic and Physical Properties
      13.5.1.1 Trends in Atomic Radius
13.5.1.2 Trends in Electronegativity
13.5.1.3 Trends in Electron Affinity
13.5.1.4 Trends in Melting and Boiling Points
13.5.1.5 Bond Enthalpies
   13.5.1.5.1 Bond Enthalpies in Halogens
   13.5.1.5.2 Bond Enthalpies in Hydrogen Halides
13.5.2 Strength of Halogens as Oxidizing Agents: F > Cl > Br > I
13.5.3 The Acidity of Hydrogen Halides
13.5.4 Halide Ions as Reducing Agents and Trends in Reducing Strength Ability of Halide Ions

14. d AND f-BLOCK ELEMENTS: TRANSITION ELEMENTS
   Introduction
   14.1 General Features
      14.1.1 General Features of Transition Elements
      14.1.2 Electronic Structure
      14.1.3 Binding Energy
      14.1.4 Variable Oxidation States
      14.1.5 Catalytic Activity
      14.1.6 Magnetic Behavior
      14.1.7 Alloy Formation
   14.2 Coordination Compounds
      14.2.1 Components of complex compounds
   14.3 Chemistry of some important transition elements
      14.3.4 Iron
      14.3.5 Copper

15. ORGANIC COMPOUNDS
   Introduction
   15.2 Coal as a Source of Organic Compounds
      15.2.1 Destructive Distillation of Coal
   15.3 Characteristics of Organic Compounds
   15.6 Functional Groups and Homologous Series
   15.7 Detection of Elements in Organic Compounds

16. HYDROCARBONS
   16.1 Types of Hydrocarbons
   16.2 Alkanes and Cycloalkanes
      16.2.1 Nomenclature
      16.2.2 Physical Properties
      16.2.5 Reactivity
   16.5 Alkenes
      16.5.1 Nomenclature
      16.5.2 Relative Stability
      16.5.3 Structure
      16.5.4 Preparation of Alkenes
1. Dehydration of Alcohols
2. Dehydrohalogenation of Alkyl Halides

16.5.5 Reactivity
16.5.6 Electrophilic addition reactions of alkene
1. Hydrogenation
2. Hydrohalogenation
3. Hydration
4. Halogenation
5. Halohydration
6. Epoxidation
7. Ozonolysis
8. Polymerization

16.6 Isomerism

16.7 Alkynes
16.7.1 Nomenclature
16.7.4 Physical Properties
16.7.5 Preparation of Alkynes by Elimination Reactions
16.7.6 Reactivity
16.7.7 Acidity of Terminal Alkynes

16.7.8 Addition Reactions of Alkynes
1. Hydrogenation
2. Hydrohalogenation
3. Hydration
4. Bromination
5. Ozonolysis

16.8 Benzene and Substituted Benzenes
16.8.1 Nomenclature
16.8.2 Physical Properties

16.9 Structure of benzene
16.9.2 Resonance
16.9.3 Resonance Energy and Stabilization
16.9.4 Reactivity and Reactions
   Electrophilic Aromatic Substitution Reactions
   Substituent Effects in benzene, Classification of substituent on benzene

17. ALKYL HALIDES AND AMINES

Introduction

17.1 Alkylhalides
17.1.1 Nomenclature
17.1.2 Physical Properties
17.1.3 Structure
17.1.4 Preparations of Alkyl Halides
   17.1.4.1 From Alcohol
   17.1.4.2 From Alkanes
17.1.5 Reactivity
17.1.6 Reactions of Alkyl halide
   17.1.6.1 Nucleophilic Substitution Reactions of alkyl halide
   17.1.6.2 Substrate, nucleophile and leaving group
   17.1.6.3 Carbocation and their stability
   17.1.6.4 SN1 Mechanism
   17.1.6.5 SN2 Mechanism
17.1.7 1, 2 Elimination Reactions
17.2 Organometallic Compounds (Grignard’s Reagents)
  17.2.1 Preparation of Grignard’s Reagents
  17.2.2 Reactivity
  17.2.3 Reactions of Grignard’s Reagents
    17.2.3.1 with Aldehydes and Ketones
    17.2.3.2 with Esters
    17.2.3.3 with CO₂

18. ALCOHOLS, PHENOLS AND ETHERS
Introduction
Alcohols
  18.1.1 Nomenclature
  18.1.2 Physical Properties
  18.1.3 Structure
  18.1.4 Acidity
  18.1.5 Preparations of Alcohols
    1. Hydration of Alkenes (review)
    2. Hydrolysis of Alkyl Halides (review)
    3. Reaction of RMgX with Aldehydes and Ketones (review)
    4. Reduction of Aldehydes and Ketones
    5. Reaction of RMgX with Esters (review)
    6. Reduction of Carboxylic Acids and Esters
  18.1.6 Reactivity
  18.1.7 Reactions of Alcohols
    a. Reaction in which C-O bond is broken
    b. Reaction in which O-H bond is broken
    c. Oxidation of alcohols

18.2 Phenols
  18.2.1 Nomenclature
  18.2.2 Structure
  18.2.3 Physical Properties
  18.2.4 Comparison of acidity of phenol, alcohol and carboxylic acid

18.3 Ethers
  18.3.1 Nomenclature
  18.3.2 Preparation
    Physical properties
    Reactions of ether

19. ALDEHYDES AND KETONES
  19.1 Nomenclature
  19.2 Physical Properties
  19.3 Preparation of Aldehydes and Ketones
  19.4 19.4.1 Ozonolysis of Alkenes (review)
        19.4.2 Hydration of Alkynes (review)
        19.4.3 Oxidation of Alcohols (review)
19.4.4 Friedel-Crafts Acylation of Aromatics (review)

19.5 Reactions of Aldehydes and Ketones

19.5.1 Nucleophilic Addition Reactions
   (i) base catalyzed HCN
   (ii) Condensation reactions
   (iii) Haloform Acid catalyzed (2,4-DNPH)

19.6 Oxidation Reactions

20. CARBOXYLIC ACIDS AND FUNCTIONAL DERIVATIVES

Introduction
20.1 Nomenclature
20.2 Physical Properties
20.3 Structure
20.4 Acidity
20.5 Preparations of Carboxylic Acids
   20.5.1 Carbonation of Grignard’s Reagent (review)
   20.5.2 Hydrolysis of Nitriles
   20.5.3 Oxidation of Primary Alcohols (review)
   20.5.4 Oxidation of Alkylbenzenes (review)
20.6 Reactivity
20.7 Reactions involving Carboxyl group (-COOH)
   A. Reduction to Alcohols
   B. Decarboxylation Reactions
20.7.4 Reactions of Carboxylic Acid Derivatives
   A. Acyl Halides
   B. Acid Anhydrides
   C. Esters
   D. Amides

21. BIOCHEMISTRY

Introduction
21.1 Carbohydrates
   21.1.1 Classification of carbohydrates (mono, di and poly carbohydrates explanation with small table)
   21.1.2 Functions
21.2 Proteins
   21.2.1 Classification
   21.2.2 Structure
   21.2.3 Properties
   21.2.4 Importance of Proteins
21.4 Lipids
   21.4.1 Classification
   21.4.2 Structure
   21.4.3 Properties of Lipids
21.6 Minerals of Biological Significance
21.6.1 Sources and Biological Significance of Iron Calcium Phosphorous and Zinc

22. Industrial Chemistry
   Introduction
   22.4 Pesticides
   22.6 Synthetic Polymers (PVC and Nylon)
   22.8 Adhesives

23. ENVIRONMENTAL CHEMISTRY
   Introduction
   23.1 Chemistry of the Troposphere
      23.1.1 Smog (complete topic)
      23.1.2 Acid Rain
      23.1.3 Green house effect and Global Warming
      23.1.4 Automobile
   23.3 Water Pollution and Water Treatment
      23.3.2 Only water waste treatment
   23.4 Green Chemistry

24. ANALYTICAL CHEMISTRY
   Introduction
   24.2 Modern Methods of Analysis
      Spectroscopy complete topic

Note: Topic related Exercise questions and quick quiz are included. Society, science and technology of all chapters is not included.

It is obvious that questions related to the topics not mentioned above are not included in exam. Paper will be curriculum based not book based
## REDUCED LIST OF PRACTICALS
### CHEMISTRY – HSSC

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<td>4.</td>
<td><strong>States of Matter I: Gases</strong></td>
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<tr>
<td></td>
<td>2. Demonstrate that Gases spread by diffusion to Areas of lower Concentration</td>
<td>Minor</td>
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<td>5.</td>
<td><strong>States of Matter II: Liquids</strong></td>
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<td>5. Prove that the Loss of Thermal Energy When a Liquid evaporate Will Lower the Temperature of the Liquid</td>
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<td>6.</td>
<td><strong>States of Matter III: Solids</strong></td>
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<td></td>
<td>6. Crystallize Benzoic Acid from water</td>
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<td>7.</td>
<td><strong>Chemical Equilibrium</strong></td>
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<td>7. Purify a given sample of Sodium Chloride by passing HCl Gas (application of common ion effect)</td>
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<td>8.</td>
<td><strong>Acid, Bases and Salts</strong></td>
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<td></td>
<td>9. Determine the Exact Molarity of the Given Solution of H₂SO₄ and the Volume of this Acid Required to Prepare 500 ml of 0.02 M Acid by Volumetric Method</td>
<td>Major</td>
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<td></td>
<td>10. Determine the Percentage of NaOH in the Given Solution by Volumetric Method</td>
<td>Major</td>
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<td></td>
<td>11. The given solution contains 6gms of Na₂CO₃ dissolved per dm³. Determine the Percentage Purity of the Sample Solution by Volumetric Method.</td>
<td>Major</td>
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<td></td>
<td>12. Determine the Value of X by Volumetric Method in the Given Sample of 6.3g of (COOH)₂, XH₂O Dissolved per dm³.</td>
<td>Major</td>
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<td>12.</td>
<td><strong>Electrochemistry</strong></td>
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<td>15. Standardize the Given Solution of KMnO₄ and Calculate the Volume of KMnO₄ Required for Preparing 1 dm³ of 0.01M KMnO₄ Solution Volumetrically.</td>
<td>Major</td>
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<td>16. Determine the Amount of Iron in the Given Sample Volumetrically.</td>
<td>Major</td>
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<td>13.</td>
<td><strong>s- and p- Block Elements</strong></td>
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<td>19. Detect the following Cations:</td>
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<tr>
<td></td>
<td>NH⁺⁺⁺, Mg²⁺, Al³⁺, Ca²⁺, Cr³⁺, Mn²⁺, Fe²⁺, Fe³⁺, Cu²⁺, Zn²⁺, Ba²⁺, Pb²⁺</td>
<td>Major</td>
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<tr>
<td></td>
<td>Detect the Following Anions:</td>
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<td></td>
<td>CO₃⁻⁻, NO₃⁻, NO₂⁻, SO₄²⁻, SO₃²⁻, Cl⁻, Br⁻, I⁻, CrO₄²⁻</td>
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<td></td>
<td>Perform Tests for the Following Gases:</td>
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<td></td>
<td>NH₃, CO₂, H₂O₂</td>
<td>Major</td>
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<td>14.</td>
<td><strong>d-f- Block Elements</strong></td>
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<td>20. Prepare Nickel Dimethyl Glyoxime.</td>
<td>Minor</td>
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<td>18.</td>
<td><strong>Alcohols, Phenols and Ethers</strong></td>
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<td>22. Prepare Iodoform.</td>
<td>Minor</td>
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# REDUCED SYLLABUS
## MATHEMATICS-XII

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<td>Q1(i, iii, iv); Q2; Q3(i, ii)</td>
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<td>Q1(ii, iv, v, vi); Q2(i, iv, vii, viii, ix); Q3; Q4(ii, iii, vi, vii, vii, ix, x, xi)</td>
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<td>Q1(i, ii, iii); Q2(i, iii); Q3(i, ii); Q4</td>
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<td>Q1(i, iii, v, vi, vii, ix, xii, xiv); Q2</td>
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<td>Q1</td>
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<td>Exercise 2.3</td>
<td>Q2; Q3; Q5; Q6; Q7; Q8; Q10; Q11; Q13; Q14; Q15; Q16; Q17</td>
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<td>Exercise 2.4</td>
<td>Q1(ii, iv, v); Q2(ii, iv, v, vi); Q3; Q4; Q5(iii, iv, v)</td>
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<td>Exercise 2.5</td>
<td>Q1(iii, iv, v, vi, vii); Q2(i, ii); Q3; Q4(i); Q5(ii); Q6; Q7; Q8; Q10(iii, v, vi); Q11; Q12</td>
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<td>Exercise 2.6</td>
<td>Q1(ii, iii, v, vi, vii, viii); Q2(i, iii, v, vi, ix, x, xii, xiii); Q3(i, iii, iv, v)</td>
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<td>Exercise 2.7</td>
<td>Q1(i, ii); Q2(i, ii); Q3(ii, iii, v); Q4(ii, iii); Q5; Q6; Q7; Q8; Q9</td>
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<td>Exercise 2.8</td>
<td>Q1(i, ii, iii, v); Q2; Q3</td>
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<td>Q1; Q2(iii, iv); Q3(i, iii); Q4</td>
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<td>Exercise 3.2</td>
<td>Q1(i, iii, iv, vi, viii, x, xi); Q2(i, ii, v, vii, ix, x, xi, xii, xiii)</td>
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<td>Exercise 3.3</td>
<td>Q1; Q2; Q3; Q4; Q6; Q8; Q9; Q11; Q12; Q14; Q15; Q16; Q17; Q18; Q19; Q20; Q21</td>
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<td>Exercise 3.4</td>
<td>Q1(i, iii, vii, xi, xiv, xv, xvi, xvii, xix, xx, xxi); Q2(i, iii, iv, vii, viii); Q3; Q4(ii, iii, v, vi); Q5(i, iv, v, vii, viii, ix, x, xi)</td>
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<td>Exercise 3.5</td>
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<td>Exercise 3.6</td>
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<td>Exercise 3.7</td>
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<td>Exercise 4.3</td>
<td>Q3(d); Q4; Q5; Q6; Q7; Q10(e, f, g); Q11; Q12; Q13; Q14; Q15; Q20; Q21(a); Q22(c); Q23(c); Q24; Q25; Q26; Q27; Q29(b); Q30; Q31; Q32</td>
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<td>Q2; Q4; Q5; Q6; Q7; Q10(b, d); Q11(a); Q12; Q13; Q14</td>
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<td>Exercise 4.5</td>
<td>Q1; Q4; Q6; Q7; Q9</td>
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| Chapter 5 | Linear Inequalities and Linear Programming |
| Exercise 5.1 | Q1(ii, iv, v, vi); Q2(iii, iv, v); Q3(iv, v, vi); Q4(ii, iv, v, vi); Q5(i, iii, v, vi) |
| Exercise 5.2 | Q1(ii, v, vi); Q2(i, ii, iv, v, vi) |
| Exercise 5.3 | Q1; Q3; Q4; Q6; Q7 |

| Chapter 6 | Conic Section |
| Exercise 6.1 | Q1(a, b); Q2(a, b); Q3(a, b); Q4; Q6; Q8; Q9 |
| Exercise 6.2 | Q1; Q3; Q4; Q7; Q8(i, ii); Q9 |
| Exercise 6.3 | Q1; Q2; Q3; Q4 |
| Exercise 6.4 | Q1(i, ii, iii, v, vi, ix, x); Q2(i, v, vii, viii, ix, x); Q3; Q6; Q8; Q9 |
| Exercise 6.5 | Q1(i, ii, iii, iv, vi, vii, x); Q2(i, ii, iv, v); Q3; Q5; Q6; Q7; Q8 |
| Exercise 6.6 | Q1(i, iii, iv, v, vi, vii, viii); Q2(i, ii, iii, v, vi, vii, viii); Q3; Q6 |
| Exercise 6.7 | Q1; Q2; Q3; Q4; Q5; Q6; Q7 |
| Exercise 6.8 | Q1(ii, iii); Q2(i, ii); Q3(ii, iv); Q4(i, ii) |
| Exercise 6.9 | Q2; Q3 |

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# REDUCED SYLLABUS
## STATISTICS-XII

### 1. Probability (1/8)

<table>
<thead>
<tr>
<th>Content</th>
<th>Scope</th>
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</thead>
<tbody>
<tr>
<td>Brief revision of set theory, random experiment, sample space, events. Axiomatic and relative definition of probability. Conditional probability, multiplication theorem, (without proof) independence, application of addition theorem, counting rules, permutations and combinations and their real-world problems involving the computation of probabilities.</td>
<td>In explaining ‘basic concepts’, give the difference between certainty and uncertainty by examples. Examples shall be selected from areas such as, business, Medicine, Agriculture, Astronomy, Psychology, etc. Also the applications of probability for prediction and forecasting be highlighted. Addition theorem of two events conditional probability, multiplication theorem be explained with the help of bivariate tables. Concept of independence be explained using classical logic through coins and dice as well as real events. In counting problems many examples be given for the calculation of number of combinations and permutations. The multiplication method of counting be explained through examples. While explaining applications of probability from real world problems, exercise be selected from different scientific fields such as Medicine, Meteorology, Engineering Agriculture, Space Sciences etc.</td>
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</tbody>
</table>

### 2. Discrete and continuous probability distribution (2/8)

<table>
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<tr>
<th>Content</th>
<th>Scope</th>
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<tbody>
<tr>
<td>Concept of random variable, discrete univariate probability distributions, joint and marginal probability, expectation and variance of discrete random variables, discrete uniform distributions generation and application of random numbers, continuous univariate probability distributions through geometrical concepts.</td>
<td>Explain random variable by sample space, variable and probability. Explain the difference between mathematical variable and random variable: random variables can be discrete or continuous. Examples of random variables like number of patients in a clinic per day, number of accidents on a given road per week, number of plants without followers per square yard in a given fields etc, be explained as real world examples of random variable. In discussing discrete variate: “Probability distribution expectation and variance”, use frequency tables for head and tails in coins, number of defective items in lots of five items</td>
</tr>
</tbody>
</table>
etc, number of accidents per week on a certain road. Discrete uniform distribution to be discussed through random numbers which should be generated or obtained from random number tables. Discrete uniform distribution would thus be obtained and mean variance would be obtained from there. While doing this random number table on one page or more than one pages may be used. “Continuous univariate probability distributions”, would be those which can be sketched through linear functions such as \( F(x) = x + a \) from the lower limit would be shown equating to one, and areas on smaller intervals would be shown as values of probability.

3. Hypergeometric and Binomial Probability, Distributions (1/8)

<table>
<thead>
<tr>
<th>Contents</th>
<th>Scope</th>
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</table>
| Bernoulli trails, Binomial distribution, its mean, variance, skewness and applications. | Hypergeometric experiments to be explained through examples such as selecting a number of fish of particular type from a large pond, selecting a set of defective items from a production belt in a factory etc. Hypergeometric distribution to be explained using “M” balls in a box out of which “k” balls are white and (M-k) balls are black and “n” balls are drawn from the box, the probability expression would be explained. Special cases for specific values of “N”, “k” and “n” to be obtained. The expression for the mean and the variance of hyper geometric distribution to be given without derivation but to be explained thoroughly, “Bernoulli trails to be explained using black and white balls in a box, head and tail in case of a coin, boy and girl in a family, defective and nondefective items in a given large lot, sick and healthy people in a town etc. The events would be defined in terms of the result of a given number of trails such as (HTTHH) occurring in a five trails from five losses of coin. The number of heads, the number of balls of a particular colour in a selection of (say ) 10 balls, etc be defined as the Binominal variable. The Binominal probability distribution to be explained by first
explaining Bernoulli trails, the mean and variance be derived. In the exercises, problems must be selected from fields such as Medicine, Agriculture, Engineering, Geology, Pharmacy and Psychology etc.

### 4. Normal Distribution (1/8)

<table>
<thead>
<tr>
<th>Content</th>
<th>Scope</th>
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</thead>
</table>
| Normal probability distribution and its properties, computation of probabilities (areas under the National Curve), applications in real life, kurtosis. | Normal Probability distribution to be explained by writing the mathematical function with its parameters. The sketches of the normal distribution to be explained by :  
  i. Keeping parameter of mean as fixed and changing the standard deviation.  
  ii. Keeping the parameter of standard deviation as fixed and changing the parameter of mean. The standard normal distribution be explained and the tables of areas under the standard normal distribution be explained. Exercise be given so that for given intervals areas are obtained with the use of normal tables and also intervals are obtained when probabilities are given. Exercise based on fields such as, Medicine, business, agriculture, Psychology, Economics etc., be solved in sufficient number. |

### 5. Sampling and sampling distribution (1/8)

<table>
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<tr>
<th>Content</th>
<th>Scope</th>
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<tbody>
<tr>
<td>Population and sample: advantages of sampling; sampling error and non-sampling error; probability and non-probability sampling sample random and stratified random sampling.</td>
<td>Population and sample, advantages of sampling” be explained by stating that populations are usually large and not generally possible to observe each and every member of it. This problem be explained as kind of difficult situation to be solved. The importance of random sample be explained, which gives accurate results for the parameters of the population and is a useful statistical procedure to arrive at almost accurate results sampling be also explained as a useful technique for prediction. “Sampling error”, be explained as the amount of error that would occur while drawing the sample,. The measurement of sampling error</td>
</tr>
</tbody>
</table>
be explained as a useful way of knowing the precision of the index, which is derived from the sample. “Non sampling error” be explained as those errors which cannot be eliminated. These occur in cases when there is a fault in the measuring scale or the observation kit. Examples of sampling be given from fields such as Agriculture, Medicine, Psychology, Economics etc.

Selection of all possible samples from finite population with and without re-placement, parameter and statistic, sampling distributions of mean and proportion, concept of Central Limit Theorem.

Explain the sampling distribution of the mean by first showing that sample mean is a random variable. In order to do this, selection of all possible samples from finite populations with and without replacement be explained. Explain the terms parameter and statistic as quantities related with the population and sample respectively. The sampling distribution of the variance be explained through examples based on a small set of observations. In the same way, the sampling distribution of proportion be explained also.

Central limit theorem be explained to show the shape location and dispersion of the distribution of the sample mean when samples are large and when the distribution of the population is unknown or known to be non-normal.

### 6. Statistical inference (1/8)

<table>
<thead>
<tr>
<th><strong>Content</strong></th>
<th><strong>Scope</strong></th>
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<tbody>
<tr>
<td>Concept of statistical Inference: Point estimation of the population mean, variance and proportion: unbasedness of mean and proportion intervals for the mean of a normal population (known and unknown standard deviation), confidence interval of proportion (large samples). Formulation of Alull and alternative hypotheses: type-I and type-II error, test of hypotheses for the mean of a normal population (known and unknown standard deviation).</td>
<td>Explained standard inference by showing that the mean and variance parameters in a population are mostly unknown. Explain that mostly, samples are only available. Discuss the techniques of inference as a set of statistical procedures by which unknown parameters of the given population are estimated. Parameters be explained as point estimators, confidence interval, hypothesis to be tested. Explain point estimation of the population mean, variance and proportion by considering a finite population of four of five observations and by writing all the samples of two or three or four observations. Mean and variance be explained</td>
</tr>
</tbody>
</table>
For population mean and proportion (large samples) with reference to such finite of mean and proportion explained with such finite populations as well. Explain the confidence Interval for the mean of a normal distribution when standard deviation is known by writing the probability express for standard normal variable on an interval and then converting it into a confidence interval and of “Mean”. When standard deviation is unknown, use of distribution and variable be explained. For population mean and proportion when the distribution is not given, large samples be considered so that central limit theorem could be applied. Explain the confidence Interval for the difference between means and proportions by considering large independent samples, so that central limit theorem is applicable. Explain Null hypothesis in its different forms i.e., simple and composite one sided and two sided. Explain the Test by considering sample mean and sample proportion. Type-I error and its probability X and Type-II error with its probability B be explained by using sketches of Normal Probability Curve. Calculation of X and B is not required. Test of hypothesis for the mean of the Normal Population be discussed by writing the steps (usually 8 or 9). Use of sketches be encouraged.

7. Association (1/8)

<table>
<thead>
<tr>
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</tr>
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<tbody>
<tr>
<td>Concept of categorical or qualitative data</td>
<td>Explain the categorical data by considering categories in a univariate case and in a bivariate case. It may further be explained using nominal and ordinal scales. It be explained that the most important statistical analysis in this type of data is known as association or independence. Real life examples be considered to explain various types of data. Explain the calculation of expected frequencies in a univariate and bivariate contingency table. Calculation of chi square to be explained by considering examples of un-variate and bivariate tables. Explain with examples the situation, where</td>
</tr>
<tr>
<td>Bivariate categorical (qualitative) data; association versus independence of two qualitative variables; (Nominal and ordinals scales), contingency table; chi-square test of independence. Measurement of association between two qualitative variables through the method of rank correlation co-efficient.</td>
<td></td>
</tr>
</tbody>
</table>
Observations are ranked or ordered. Examples where two judges rank a group of competitors in a flower arrangement competition, the ranking of competitors in a fashion show or dish competition of food dishes or in competitions of paintings etc. The formula of rank correlation be given and applied in several examples.
REDUCED LIST OF PRACTICAL STATISTICS

The following topics will be included in the syllabus of practicals:

1. Probability, discrete and continuous probability distribution.
2. Binomial and normal distribution.

Note:

Two marks will be reserved for the Practical Note Book. The Note Book must contain a minimum of Nine practical according to the pattern and guidelines given below:

Three marks will be reserved for Viva voce. Viva will be conducted in the Examination hall with reference to the practical contained in the Note Book and/or the practicals contained in examination hall.
I. National Income
      a. Product method.
      b. Income methods.
      c. Expenditure methods.
      d. Circular flow diagram.
      e. Concept of equilibrium MPC, MPS,
         \[ Y = C + S \]
         \[ Y = C + I \]
      f. Income where S=I

II. Money
   1. Barter system and its difficulties.
   3. Definition of money.
   4. Functions of money.
   5. Kinds of money.
   6. Instruments of money (credit cards, ATM Traveler Cheques).
   7. Demand for and supply of money.
   8. Value of money.
   9. Quantity theory of money (fisher’s equation).

III. Banks
   i. Definition of Bank.
   ii. Kinds and functions of Banks
   iii. Commercial Banks and their functions with particular reference to credit
        creation.
   iv. Definition of interest.
   v. Interest free Banking in Pakistan.

IV. Public Finance
   1. Public vs Private finances.
   2. Public revenue and tax culture.
      i. Tax and non-Tax revenue.
      ii. Principals of taxation.
      iii. Kinds of taxation.
         a. Direct and indirect tax.
         b. Progressive and proportional.
VI. Introduction to Pakistan Economy
   1. Agriculture Sector.
   2. Trade and Industrial Sector.

VII. National Income of Pakistan
   1. Its size and sectoral contribution.
   2. Difficulties in measurement.
   3. Causes of low per capita income.
   4. Tax culture

VIII. Economic Development and Planning
   1. Concept of economic development.
   2. Problems of under development.
   3. Factors influencing development.
   4. Quality of life (living standard) with reference to Pakistan.
   6. Importance and problems in agricultural and industrial sectors of Pakistan and their solution.
   7. Development of Industries.

X. Banking in Pakistan
   a. Commercial Banks and their functions.
   b. Role of banking system in economic development.
   c. State Bank of Pakistan its functions and importance.

XII. Foreign Trade of Pakistan
   1. Major exports of Pakistan.
   2. Major Imports of Pakistan

XIII. Economic System of Islam
   9. Comparison between capitalism, socialism and Islamic System.
REDUCED SYLLABUS
COMPUTER SCIENCE-XII

1. OPERATING SYSTEM
   1.1 Introduction to Operating System
   1.2 Operating System Functions
   1.3 Process Management

2. SYSTEM DEVELOPMENT LIFE CYCLE
   2.1 System Development Life Cycle

3. OBJECT ORIENTED PROGRAMMING USING C++
   3.1 Introduction
   3.2 C++ Constants and Variables
   3.3 Input/ Output Handling
   3.4 Operators in C++

4. CONTROL STRUCTURES
   4.1 Decisions
   4.2 Loops

5. ARRAYS AND STRINGS
   5.1 Introduction
   5.2 Two dimensional Arrays
   5.3 Strings

6. FUNCTIONS
   6.1 Functions

8. OBJECTS AND CLASSES
   8.1 Classes
REDUCED SYLLABUS
COMPUTER SCIENCE HSSC (2009 NBF)
LIST OF COMPOSITE PRACTICALS

COMPUTER HARDWARE
- Identification of Input devices, Output devices, Processing devices, Communication devices.
- Identification of various parts of the Motherboard (Ports, Slots, Buses, CPU, Power supply, etc.)
- Identification of various types of memories (RAM, ROM, Cache).
- Identification of various types of secondary storage devices (HD, CD, DVD, Flash memory, Memory card, Blue ray(BD) disk, SSD, etc.).
- Identification of network devices (Router, NIC, Cables, Switch/hub)

MICROSOFT ACCESS 2007
- Starting Microsoft Access
- Creating Tables, Assigning Primary key to the Table, Saving the Table
- Adding Records to a Table, Modifying Records in a Table, Deleting Records from a Table
- Modifying Records in a Table, Deleting Records from a Table
- Creating Relationships between tables
- Creating Queries
- Viewing/Running Query, Modifying Query, Adding a Calculating Column/Field to a Query
- Creating Queries using Query Design
- Creating and Running a Data Entry Form, Making Forms More Usable with Controls
- Creating Form with Sub-Form for Related Tables, Creating a Switchboard Form
- Generating Reports, Creating a Report using a Query

C++ PROGRAMMING LANGUAGE
Programs in C++ related to the following topics.
- Input/Output statements/functions
- Operators
- Decision control structure – if()
- Looping control structure – for(), while(), do-while()
- Arrays – One dimensional, two dimensional
- Strings
- Objects and Classes

Note: The scope/level of programming can be followed as given in the Textbook of Computer Science for XII (Published by NBF).
نصاب عرب بباره ويلي جمعت كلي

المشاهاير
الجوأر
السيدة جمال الدين الأفغاني
بين النكتة العربية والباكستانية
الرسائل كتاب أبي بكر إلى خالد بن الوليد
الشاعر
الإحاديث النبوية
باكستان
الأرض الطاهرة
السيرة النبوية
الشاعر
الجوأر
عالم العربي
المشاهاير
الإحاديث النبوية
الخطب
الشاعر
الجهاد
الجوأر
الجوأر
حقوق العباد
في حب الوطن
في عزم والهمة الرفيعة
في المستشفى
الدول العربية
جلالة الملك فيصل المَعْتَم
جوامع الكلم
خطبة عمر بن عبد العزيز
في فضل الصدق والعمل الجاد
من هذي القرآن الكريم
عروس الجناب
مصنف مرى
في موقف السياسات

92
نصاب فارسي باردویی بسیار کثیف یا

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REDUCED SYLLABUS
HEALTH AND PHYSICAL EDUCATION-XII

A. Physical Education

1. Values of games and sports

3. Rules and fundamental skills:
   a. Boys: Hockey
   b. Girls: Badminton

4. Rules and fundamental skills of Athletics:
   a. Boys: Javelin Throw, 400 meters race
   b. Girls: Javelin Throw, 400 meters race

B. Health Education

Functions of the following systems in detail:

1. Food and Nutrition:
   a. Constituents of diet, what is balanced diet?

2. Drugs and their effects:
   i. Opium
   ii. Nicotine
   iii. Morphia
   iv. Arsebue
   v. Sleeping pills

4. First Aid:
   a. Fire & electric hazards and safe guard against them
   c. Artificial respiration by the following methods:
      i. Mouth to mouth: in case of children mouth to mouth and nose method
      ii. Schafer’s method
REDUCED LIST OF PRACTICALS
HEALTH AND PHYSICAL EDUCATION

1. Educational Gymnastics: Exercise for legs, arms, dorsal, heaving

2. Agilities:
   a. Boys: Forward-roll, Backward-roll, dive-roll
   b. Girls: Forward-roll, Backward-roll, dive-roll

3. Fundamental skill of:
   a. Boys: Volleyball
   b. Girls: Volleyball

4. Fundamental skills of athletics:
   a. Boys: Shot put; Hos step & 4x100 meters relay
   b. Girls: Shot put; Hos step & 4x100 meters relay

5. Educational Gymnastics: Head and back exercise; Lateral exercises, Abdominal exercises, Balance exercise

7. Fundamental skills in games:
   a. Boys: Hockey
   b. Girls: Badminton

8. Fundamental skills in Athletics:
   a. Boys: Javelin Throw & 400 meters race
   b. Girls: Javelin Throw & 400 meters race
1. **Introduction**
   a. Definition and scope of logic
   b. Propositions & Arguments
   c. Premises/ Conclusion Indicators
   d. Types of Arguments:
      i. Inductive
      ii. Deductive
   e. Truth & Validity

2. **Language**
   b. Three Important uses of Language:
      i. Informative
      ii. Expressive
      iii. Directive

4. **Categorical Propositions**
   a. Four Categorical Propositions
   b. Quantity, quality and distribution
   c. Traditional squares of opposition
   d. Three laws of thought

5. **Categorical Syllogism and Simple Arguments**
   a. Categorical syllogism
      i. Figure
      ii. Mood
      iii. Standard form
      iv. Rules
      v. Venn diagram
   b. Simple argument forms and Truth Table

6. **Inductive Logic**
   a. Forms of Inductive Generalization inductive Analogy
   b. Factors on which their strength depends
REDUCED SYLLABUS
GEOGRAPHY-XII

I. The Geography of the Continents
   1. Asia          2. Europe          3. Africa

II. Economic Geography of the following Countries
    1. Pakistan

III. Population Geography
    1. Introduction
    2. The distribution and density of Population
    3. Population growth
    4. Some Population characteristics
    5. Migration
REDUCED LIST OF PRACTICALS
GEOGRAPHY

SECTION-I
1. Introduction
   • Maps, its essentials and types (with the help of Atlas in the lab)
   • Finding location on a globe, latitude and longitude
   • Longitude and time (calculation on the globe in lab)
   • Representation of direction
   • Methods of finding directions
2. Scales and their construction
   • Scale and its types
   • Methods of showing scale on a map and conversion
   • Construction of Plain Scale
   • Use of Scale: measurement of distance on the map between points

SECTION-II
4. Map Projection
   • Basic concept of map projection
   • Types of projection, characteristics and uses
   • Identification of projection on atlas maps
5. Statistical Diagrams
   • Line graph
   • Bar Graph
   • Pie-graph
6. Distribution Maps
   • Shading Method
   • Dot Method

Note: The students are required to use sketches, maps and diagrams to illustrate the Geography of an area. They are also required to do exercises of drawing outline map of Pakistan and its provinces and general map reading; however the Globe, physical and political maps of the World, Asia, South Asia and Pakistan should be available in the classrooms.

ESSENTIALS FOR PRACTICAL
The following instruments and materials are essential for doing practical. These should be provided to schools/students, whatever possible.

Good pair of compass fitted with both pencil and pen points. The pencil points should be kept thin and round.
Pencils-H and HB
Dividers, Erasers and ruler.
Drawing pen and Drawing Box
Ink and Graph Paper
Protector and Ruling Pen, Coloured Crayons or Paint Box.
I. Muslim Education in Sub-Continent
   1. Historical background (Maktab, Madrassa Education)
   2. Contribution of Muslim thinkers towards education with special reference to:
      - Al-Ghazali
      - Ibni-Seena
   3. Concept of knowledge
   4. Aims & objective of education
   5. Curriculum
   6. Methods of teaching
   7. Student teacher relationship
   8. Salient feature of the Muslim system of Education in Indo-Pak:
      - Objectives
      - Curriculum and content
      - Administration
      - Teaching Methods
      - Evaluation

II. British Education System in Sub-Continent
   1. Introduction
   2. Beginning of East Indian Company
      - Charter act (1813)
      - Woods dispatch (1854)
      - Sergeant Report (1944)

III. Policies and Plans of Education in Pakistan
   1. Introduction:
      - Implications of Ideology of Pakistan for Education
      - Salient feature of the following Education Policy
      - First Educational Conference 1947
      - Report of the commission on NE, 1959
      - National Education Policy 1998-2010

IV. Educational Problems in Pakistan
   1. Educational issues and problems in Pakistan:
      - Population growth
      - Low enrolment and heavy drop out
      - Low literacy
      - Indiscipline
      - Female education
      - Economic and social conditions
      - Physical condition of educational institutions
      - Quality of Education
      - Investment in Education
V. Role of Various Organizations Contributing Towards Education

2. Curriculum and textual material development:
   i. Federal Ministry of Education Curriculum Wing
   ii. Provincial bureaus of curriculum
   iii. Textbook Boards
   iv. Private Sector organization

3. Staff Development
   i. Colleges of Education
   ii. Government Elementary College of Education
   iii. Private Sector Organization

4. Examination:
   i. Federal Board of Intermediate and Secondary Education (FBISE)
   ii. Provincial Boards of Intermediate and Secondary Education (BISEs)
   iii. Boards of Technical Education (BTE)
   iv. Rural Development Education
REDUCED SYLLABUS
OUTLINES OF HOME ECONOMICS-XII

Clothing & Textiles:
2. Study of fibres (Cotton, Wool, Silk, Rayon and Nylon)
   a. Characteristics
   b. Simple methods of identification
   c. Care and storage

4. Grooming:
   a. Physical fitness
   b. Personal
   c. Wardrobe planning
   d. Use of accessories

Food & Nutrition:
1. a. Definition
   b. Functions of food in the body

2. Study of Food Nutrients: Carbohydrates, proteins, fats, minerals, vitamins and water
   a. Classification
   b. Sources
   c. Functions
   d. Effect of deficiency in diet
   e. Common deficiency, diseases and symptoms

4. Basic 4 Food Groups Selection: Preparation, Cooking and Storage
   a. Meat
   b. Cereals (Wheat, Corn & Rice)
   d. Milk & Milk Products

5. Menu Planning
   simple rules: (Nutritional adequacy, pliability, colour, texture and economizing on money, fine and flavour)
REduced list of PracticalS
Outlines of Home Economics
(Maintain a record of the Practical in a file)

SECTION-I
1. Time and motion study – preparing time plans
2. Emphasis on method of work simplification:
   Experiment of at least 4 activities from different aspects of life e.g.
   i. Laying of tables
   ii. Polishing, furniture, brass or silver
   iii. Dish-washing
   iv. Cleaning and dusting
3. Making budgets for different income levels

SECTION-II
7. Drafting of the following garments:
   Basic bodies block and adapt it to the design of your own choice
8. Stitching of Qameez
10. Clothing file
   a. Drafting of garments, samples of 6 basics stitches, use of illustration to depict basic
      colour schemes and accessories
   b. Basic seam finishes
11. Weighing and measuring techniques of food items
12. Prepare selected foods involving basic principles of cookery of various food groups:
    cooking practicals:
    a. Egg cookery i.e. boiled, fried, poached
    b. Milk cookery, sheer khurma, firni, custards (stirred, steam baked)
    c. Meat cookery, dry and moist cookery (Shami kabab, korma, chicken pulao/vegetable
       pulao)
    d. Vegetables salads:
       i. Tossed salad
       ii. Arranged salad with cooking
       iii. Fruit, salad (Gelatin Mould)
           Bhujias – Spinach Potatoes
    e. Cereals:
       i. Daal (dry and soupy)
       ii. Chapati, Paratha
       Preparation of at least 3 of the following:
    g. Plan a day’s menu for your family
## REDUCED SYLLABUS
### FINE ARTS HSSC-II

### ART HISTORY: 40 Marks

<table>
<thead>
<tr>
<th>Chapters</th>
<th>General Discussion</th>
<th>Contents to be focused on:</th>
</tr>
</thead>
</table>
| **Art of the Islamic World** | ✓ Basic plan of mosque shows simplicity.  
✓ Influence of Muslims in Spain with special reference to arabesque.  
✓ Introduction of embellishments on mosques in different Muslim regions. | ✓ How mosque architecture was developed, which influences it took from contemporary civilizations e.g. adoption of dome architecture.  
✓ Gradual transition in the plan of mosque and amalgamation of local traditions of each area where Islam was introduced  
✓ Unique qualities of religious and secular buildings of the Islamic world which marked culmination of Muslim architecture in general. |
| a) **Alhambra Palace and Cordoba Mosque** in Spain  
b) **Blue Mosque** in Turkey  
c) **Ibn-e-Tulun Mosque** Cairo Egypt | | |

### Persian influence was first introduced to the Indian subcontinent by Muslim rulers of Turkic and Afghan origin, especially with the Delhi Sultanate from the 13th century, and in the 16th to 19th century by the Mughal Empire. ... Persian became the preferred language of the Muslim elite of north India.

### Turko-Persian influence on art and culture of the Indian Subcontinent in the Sultanate period

- a) **Qutub Minar**, Delhi  
- b) **Shah Rukh-e-Alam Mausoleum** Multan

✓ The composite **Turko-Persian tradition** refers to a distinctive culture that arose in the 9th and 10th centuries in Khurasan and Transoxiana (present-day Afghanistan, Iran, Uzbekistan, Turkmenistan, Tajikistan, minor parts of Kyrgyzstan and Kazakhstan)  
✓ The Perso-Islamic tradition was a tradition where the Turk groups played an important role in its military and political success while the culture raised both by and under the influence of Muslims used Persian as its cultural

### Characteristics of Sultanate architecture

✓ A mixture of Indian (Hindu) and Iranian (Muslim) Style (to construct their buildings on the pattern of Iran and Central Asia).  
✓ Introduction of trabeated system (post & lintel), Islamic brick architecture, doomed tombs and mausoleums  
✓ Arabeque designs began to be used for decoration purposes.  
✓ The use of **Islamic calligraphy** in the buildings served dual purposes i.e. religious as well as decorative.
vehicle.
✓ **Regarding Turko-Persian** influences, impact of Mughals be discussed briefly.

<table>
<thead>
<tr>
<th>Mughal period(1526-1857) Architecture</th>
<th>Time line</th>
<th>Synthesis of the Hindu and Islamic architectural modes and techniques.</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Lahore Fort, Lahore</td>
<td></td>
<td>✓ Introduction in India the Persian style of four-fold garden (Chahar Bagh)</td>
</tr>
<tr>
<td>b) Taj Mahal, Agra</td>
<td></td>
<td>✓ Characteristic features of Mughal architecture are the bulbous domes, the slender minarets with cupolas at the four corners, large halls, massive vaulted gateways and delicate ornamentation and extensive use of Red sandstone and later white marble</td>
</tr>
<tr>
<td>c) The Badshahi Mosque, Lahore</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Miniature Paintings or the Art of book miniature paintings form:</th>
<th>Persian in origin</th>
<th>Synthesis of the Persian, local Hindu painters and European influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Akbar Nama: Mughal elephants in the battle 16th century.</td>
<td>✓ Miniature painting. Miniature painting, also called (16th–17th century) limning, small, finely wrought portrait executed on vellum, prepared card, copper, or ivory. The name is derived from the minimum, or red lead, used by the medieval illuminators</td>
<td>✓ Methods and techniques of Mughal miniatures</td>
</tr>
<tr>
<td>b) Jahangir Nama: Jahangir holding a globe. 17th century.</td>
<td>✓ Difference between Persian and Mughal Paintings</td>
<td>✓ Mughal paintings are a particular style of South Asian painting, generally confined to miniatures either as book illustrations or as single works to be kept in albums, which emerged from Persian miniature paintings</td>
</tr>
<tr>
<td>c) Squirrels in a plane tree 1605-08 by Abu-ul-Hassan</td>
<td>✓ Differentiate Mughal and Rajput Paintings</td>
<td></td>
</tr>
<tr>
<td>d) Badshahnama: Shahjahan receiving his three eldest sons and Asif khan during his accession ceremonies, Agra, Diwan-i-amm,1628</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Colonial period:** British Raj, British **colonial rule** in India, 1858 to 1947.

**Company style**
## Art in Pakistan

### Old Masters of Pakistan

- a) Ustad Allah Baksh
- b) Abdul Rehman Chughtai
- c) Hajji Sharif
- d) Zain ul abideen
- e) Sadequain
- f) Shakir Ali
- g) Anna Molka Ahmed

### Modern Artists of Pakistan

- h) Zahoor-ul-akhlaq
- i) Shahid sajjad
- j) Ismail Guljee
- k) Bashir Ahmed
- l) A.R Nagori
- m) Mian Salahudin

### Characteristics of works of all artist should be elaborately discussed

- All major works explained and any famous work can be discussed in detail, which marks the progress of artist making him prominent.

### Social and political conditions according to artists’ works must be discussed e.g. Fame of calligraphy in late 60’s under Islamization of state.

### Studio work: 60 marks

#### 2D FINEARTS

**DRAWING/ PAINTING**

- Portrait 3
- Life drawings 6
- Nature Drawings 3
- Landscape 2
  - Technique: as per requirement
  - Medium: paper, lead and colour pencil, pen and ink, markers, and pestles, water colours, Acrylics and mix media

#### 2D APPLIED ARTS

- Book cover and Illustrations 2
- Posters on diverse issues 6 (focus on the concept, typography and execution)
- Weaving (Knotting, off loom weave, minimum size: A4, Medium: Thread, wool, ribbon, fabric)

**DIGITAL TECHNOLOGY:** 2 (size A4, Hard copy)
Computer Arts (clipart and soft wares for compositions Awareness

- **PHOTOGRAPHY**: 2 (Minimum size: post card)
  (Data collection for composition Awareness with still photography using any available camera

**Note:**

- It is desired that student selects the best work for the portfolio and exhibit in presentable manner.
- The works be duly signed, dated and stamped by the Art teacher.
- The works reflect the knowledge and understanding of elements of Visual Art and principles of design.
- **Plagiarism should be vigilantly checked by the Art teacher.** For practice purposes copied work is allowed, yet no copied work shall be accepted as part of Portfolio.
REVISED SYLLABUS
PSYCHOLOGY-XII

I. Developmental Psychology
   1. Definition of Growth, Development and Maturation
      Difference between above mentioned terms:
      a. Piaget’s theory of cognitive development (Brief Introduction)
      b. Eriksson’s psychosocial theory-of-development (Brief introduction)
      c. Kahlberg’s theory of moral development (Brief introduction)
      d. Physical development (Brief Introduction).

II. Psychology of Health
   1. Definition of Health and adjustment
   2. Different viewpoints of Mental Health
   4. Difference between Normal and Abnormal Behavior
   5. Sources of stress, conflict, life Events, and Pressure & environmental conditions
      a. Anxiety Disorders
      b. Schizophrenia
         i. Definition, General Symptoms. Kinds; Disorganized. Catatonic. Paranoid
      c. Eating Disorders
         i. Eating as a disorder, suggestions for improving Eating Habits
         ii Right Eating
         iii. Exercising
         iv. Advices by the Doctors for Eating

III. Social Psychology
   1. Meaning & definition
   2. Elements of Socialization
   3. Socialization and Peer Group Family influence on Socialization
      i. Antisocial Behavior
      iii. Drug Addiction
      v. Prejudice
      vi. Sexual Harassment
   4. Definition, Attitude formation
   5. Attitude change, Measurement of Attitude

IV. Guidance and Counseling
   1. Meaning and difference of Guidance and counseling
   2. Principles of Guidance
      Psychoanalysis
      P.C.T. (Person Centered Techniques)
PSYCHOLOGY PRACTICALS
HSSC

1. Blind Spot
2. Muller-type-Illusion
3. Effect of Suggestion on Perception
6. Problem solving
7. Measurement of Memory by Recall Methods
9. Practical Journal & Viva Voce
10. STATISTICS
   i. Tabulation of Data
   ii. Graphic Presentation of Data
      a. Frequency Histogram
      b. Frequency Polygon
      c. Frequency Curve
   iii. Measures of Central Tendency of groups X, Un-Grouped Data
      a. Arithmetic Mean
      b. Median
      c. Mode

JOURNAL & VIVA VOCE
REDUCED SYLLABUS  
CIVICS-XII

I. Pakistan Movement
1. Meaning of Ideology
2. Significance of Ideology of Pakistan.
3. Ali Garh Movement
4. Background and formation of All India Muslim League-1906
5. Lucknow Pact 1916
6. Khilafat Movement 1919
7. Act of 1935
8. Pakistan Resolution 1940
9. 3rd June Plan

II. Constitutional Development 1947-1973
1. A brief historical outlook on constitutional development from 1947-56.
4. Salient features and Islamic Provisions of 1973 constitution
i. Parliament.
ii. President, Prime Minister
iv. Supreme Court and High Courts
v. Islamic provisions

III. Social Services in Pakistan
1. Structure and Facilities
2. Problems.

IV. Social Order in Pakistan
1. Meaning
2. Significance
3. Requisites of proper social order fulfilling the principle of liberty, justice, equity and authority in Islamic perspective.
4. Role of Islamic Values for maintaining social order and justice in welfare state.
5. Role of Police in Pakistan

V. National Integration and Cohesion
1. Meanings
2. Importance
4. Problems in the way to national integration and cohesion in Pakistan.
5. Remedial measures keeping in view the ideological basis of Pakistan
REDUCED SYLLABUS
SOCIOLOGY-XI

I. Social Control
1. Meaning
2. Significance
3. Agencies of social control
4. Social control in modern welfare society
5. Good Governance and Social Control
6. Role of Islamic Values in Social Control
7. Deviant behaviour with reference to crime and violence in Pakistani society

II. Environmental and Social Life
1. Meaning of Environment
2. Significance
3. Impact of physical environment on Social Life

III. Social Research
1. Meaning
2. Functions
3. Significance
4. Types – Pure and Applied dynamics of social research in Pakistan

IV. Social Change
1. Definition
2. Processes
4. Factors promoting social change in Pakistani society
6. Introduction of information technology and social changes taking place in Pakistani society

V. Culture and Society
1. Cultural heritage and ideological foundations of Pakistan
2. Uniformities and variabilities among the sub-cultures
3. Islamic Cultural Values
4. Nature of National Integration and Cohesion in Pakistan with special reference to debacle of East Pakistan
5. Steps to strengthen national integration in relation to Islamic ideological foundations of Pakistan
6. Definition
7. Processes and agencies of socialization
9. Definition of the national character
10. Ways to strengthen the characteristics of national character

VI. Social Problems
Meaning classification causes, consequences and remedies of following social problems in Pakistan
– Over population
– Social disorganization
– Poverty
– Illiteracy

VII. Communities
1. Definition of community
2. Nature of rural community
Introduction to Library Services

1. Selection of Material:
   a. Faculty recommendation
   b. Provision of lists supplied by different publishers to the faculties

2. Acquisition of Material:
   c. Accessioning:
      i. Invoice and payment processing
      ii. Maintaining files, faculty and fund wise

3. Classification: Definition of classification – the broad classification of knowledge in early times, its relation to book classification, the division of knowledge according to Dewy System

4. Catalogue: Definition of cataloguing, importance of catalogue, forms of entry, various kinds and forms of cataloguing. (Emphasis to be laid on the standardisation of Pakistani names)

5. Reference Documentation and Information Services:
   Meaning and definition of reference service. Methods of locating information from reference sources. Types of reference material and their basic characteristics:
   a. Dictionaries
   b. Encyclopaedias
   c. Year Books
   d. Atlases
   e. Gazettes
   f. Directories
   g. Bibliographies
   h. Biographical sources

6. Charging System: Definition, circulation record (card register), rules and regulations arrangement of records, over-due notices, reminders and recovery of fines
REDUCED LIST OF PRACTICALS
LIBRARY SCIENCE

SECTION-I (First Day)
1. Compilation of bibliography on any assigned topic, (Minimum 25 centuries)
2. Classification {50 books (25 Urdu 25 English)}
3. Practical work in College Library (Six periods of 45 minutes per week)

SECTION-II (Second Day)
1. Cataloguing {50 books (25 Urdu 25 English)}
2. Indexing of periodicals and newspapers 25 each
3. Searching of reference queries (25 items)
4. Practical work in the college library (6 periods of 45 minutes per week)
REDUCED SYLLABUS
PAKISTAN CULTURE-XII

I. Sufis and Sum Shrines
Data Ganj Bakhsh, Baba Farid Ganj-i-Shakar, Shah Abdul Latif Bhatai

II. Archaeological Treasures
KotDiji, Harappa, Mahenjodaro,Taxila

III. Architecture and Historical Monuments
Multan Tombs, Lahore Fort, Shalimar Garden Lahore, Tombs of the Kalhora and Talpur
Rulers, Hyderabad, The Khyber Pass

IV. Major Trends in Arts and Literature and Their Exponents
Poetry, Drama, Painting

V. Festivals, Social Customs and Dresses
Festivals, Eid-ul-Fitr, Eid-ul-Azha, Shab-e-Baraat, Muharram, Eid-Milad-un-Nabi, Social
Customs and Ceremonies, Birth of a child, Dress
REDUCED SYLLABUS
PAKISTAN STUDIES

I. **Genesis of Islamic Republic of Pakistan**
   I. Ideology of Pakistan
      - Concept
      - Components:
        1. Islam
        2. Democracy
        3. Social justice, equality and responsibility.

II. **Pakistan – The result of Muslim Struggle.**
    2. Foundation of Muslim League
    3. Ali Garh Tehrik
    4. Pakistan Resolution
    10. 3rd June 1947 Plan
    11. Independence Act 1947
    12. Emergence of Pakistan

II. **Initial Problems of Islamic Republic of Pakistan**
   A. Problems:
      1. Introductory remarks.
      2. Red Cliff Award – Its injustices
      3. Administrative problems
      4. Influx of Refugees
      5. Division of Assets
      6. Division of Armed Forces and Assets
      7. Water/Canal Dispute
      8. Accession of princely states (Junagarh, Manawdar, Kashmir, Hyderabad, Daccan)
   B. The vision of Quaid-i-Azam Muhammad Ali Jinnah about Pakistan
      1. Settlement of Refugees
      2. Advice to Govt officials for national service
      3. Provincialism, parochialism.
      4. Guiding principles for the economy of Pakistan.
      5. Guiding principles of Foreign Policy
      6. Advice to the students to concentrate on education.

III. **Geography of Islamic Republic of Pakistan**
    1. Physiography of Pakistan
    3. Imbalanced Economic Growth and Regional Disparities.
    5. Geo-strategic position
    6. Attraction for tourists
    7. Gateway to land locked countries: Afghanistan, Central Asian Republics
IV. **Steps towards an Islamic Republic of Pakistan**
2. Islamic provisions in the constitutional **only 1973 constitution**
8. Salient features world Human Rights Declaration 1948

V. **Administrative Structure of Pakistan and Good Governance**
4. Islamic perspective of good governance
5. Administration in the era of Hazrat Umar (RAU)

VI. **Culture of Islamic Republic of Pakistan**
1. Meeting and significance of culture.
3. Culture Heritage of Pakistan main sites.

VIII. **National Integration and Prosperity**
1. Meaning of national integration and cohesion
3. Problems in the way to national cohesion and integration in Pakistan
4. Remedial measures
   My, your and our role.

IX. **Economic Planning and Development in Islamic Republic of Pakistan**
1. Meaning and importance of Economic Planning and Development.
2. Agricultural Development
3. Industrial Development
4. Trade and Commerce
7. Information Technology

X. **Foreign Policy of Islamic Republic of Pakistan**
1. Definition of Foreign Policy
3. Objectives of the Foreign Policy of Pakistan
5. Foreign policy of Pakistan with China, India, Iran, USA, Afghanistan and Saudi Arabia
REDUCED SYLLABUS
PRINCIPLES OF ACCOUNTING

1. Accounting for Non-Profit Earning Concerns: Income and Expenditure Account; Receipts and Payments Accounts and Balance Sheet
2. Accounting for Incomplete Records: Calculation of profit and loss statement of affairs
3. Depreciation-Nature, methods straight line and diminishing balance
5. Accounting for Consignments: fully and partly sold goods excluding invoice price method, Account Sale Statement
7. Accounting for Joint Stock Companies: Formation-Kinds of companies; company documents; types of shares; issue of shares at par, at premium at discount; over-subscription for features and re-issue of share. Issue of debentures, Bond at par, at premium, and at discount-redemption of debentures

LIST OF EQUIPMENT, LAB-REQUIREMENTS

Book Keeping Machines, Overhead Projectors, Slide Projector, Scientific electric calculators, Amount perforator on Cheque, Bank Draft, Business film through T.V.
REDUCED SYLLABUS
COMMERCIAL GEOGRAPHY

1. **World**

   **Part-I:** Definition of world commercial activities and their response to different environments:
   
a. Primary/Primitive activities
b. Fishing
d. Lumbering
e. Agricultural activities
h. Farming-Subsistence
k. Types and products
l. Iron and Steel, Textile
m. Population growth-its global distribution, trends and its effect on various commercial activities
n. Growth – World-wide
o. Distribution
r. Choices of different countries
s. Inter-relationship of choices and commercial activities
t. Impact of the latest technology on existing commercial activities and the resultant trends

   **Part-II:** World resources and their distribution
   
a. Agricultural resources with special emphasis on food resources and rate of consumption
   
i. Wheat, Rice, Tea
   ii. Cotton and Rubber
   iii. Commodity flow and consumption
c. Energy resources and their application
   
ii. Electricity- Thermal/Hydro-electric/nuclear
   iii. Natural Oil and Gas

2. **Pakistan**
   
a. Location and physical environments
   
i. Geographical location and physical features
   iii. Irrigations
b. Resources and their exploitation
   
i. Agricultural and their exploitation: Sugar-cane, Cotton
   ii. Power-Electricity, Nuclear, Solar Energy
d. Logistics for the transfer of various resources:
   
i. Roads
REDUCED SYLLABUS
COMPUTER STUDIES
FOR COMMERCE GROUP

I. Introduction to Computer System
   a. Definition of Computer and usefulness in Commerce
   b. Types of Computer
      i. Differentiation among Digital, Analog and Hybrid Computers
      iii. Familiarization with terminology and brief description of various fields, within computer science i.e. Hardware, Software (System Software and Application Software) System analysis Programming etc.

II. Components of Digital Computer System and their Functions:
    Central Processing Unit:
    i. Control Unit
    ii. Arithmetic and Logic Unit
    iii. Main Memory
       a. Input/Output Devices
           Functioning, advantages and disadvantages of various input/output devices i.e. Terminal printers, Card Readers, Diskette Readers etc.
       b. Secondary Storage Devices
           Disk drives fixed (Winchester), removable, Floppy, Magnetic Tape drive etc. Usage and suitability of various secondary storage devices according to their speed and volume should be explained.

IV. Elements of Data Processing
    Problems solving and various stages involved
    a. Defining the Problem
    b. Analysing of the problem
    c. Algorithm
    d. Flow-charting
    e. Coding (Programming) the problem
    f. Processing the Problem
    g. Testing and Debugging
    h. Final Output (Showing results of Problem)

VI. Elements and Programming in Basic Language
    a. Assignment statements
    b. Control statements
    c. Input/Output statements
    d. Specification statements
    e. Usage of Basic Statements in developing programmes for simple problems

VII. Major Applications
    For Research Development in:
    Commercial, accounting, banking, insurance, shipping, census, immigration, taxation, communications, examinations, inventory (stores) personal information system
1. Definition and origin of banking

2. Kinds of Banks
   a. Central Bank
   b. Commercial Bank
   c. Industrial Bank – IDBP, NDFC
   d. Agricultural Bank
   e. Investment Bank – ICP

3. Commercial Banks
   i. Scheduled and non-scheduled banks
   ii. Functions, Importance and services performed by a modern commercial bank

4. Kinds of Bank Account:
   a. Saving
   b. Current
   c. Fixed
   d. PLS

5. Negotiable Credit Instruments:
   a. Cheque: Definition, Characteristics, Parties Types, Crossing, Dishonour
   b. Bill of Exchange: Definition, Characteristics, Parties, Types
   c. Bank Draft: Definition, Kinds, Parties

7. Central Bank
   a. Origin and growth
   b. Functions of a Central Bank
   c. Credit control measures – objectives
   d. State Bank of Pakistan – its role in the national economy
REDUCED SYLLABUS
BUSINESS STATISTICS

1. Nature of Statistics
   What is statistics? Subject matter, fields of statistics and the types of questions it can answer, importance of statistics in different fields.

2. Statistical Data
   a. Types of data – Primary and secondary

3. Presentation of Data
   a. Classification-the bases of classification

4. Averages of the First Order
   Means, Mode, Median

5. Index Number