Syllabus
Class XI (Humanities / Commerce)

There shall be one objective type paper of 100 marks comprising 100 questions with the following breakup :

a) Social Studies (Civics, Economics, History and Geography) : 60 Marks
b) Mathematics : 20 Marks
c) General Knowledge : 05 Marks
d) English : 05 Marks
e) Indo-Islamic Culture : 10 Marks

Note : The Admission Test's **Question Booklet** for Class XI (Humanities Stream / Commerce Steam) will be available in **three languages** (English / Hindi / Urdu)

SOCIAL SCIENCE SUBJECTS
(Civics, Economics, Geography and History)

CIVICS

Democratic Politics

Power Sharing Mechanisms in Democracy : Why and how is power shared in democracies? How has federal division of power in India helped national unity? To what extent has decentralization achieved this objective? How does democracy accommodate different social groups?

Competition and Contestation in Democracy : How do struggles shape democracy in favour of ordinary people? What role do political parties play in competition and contestation? Which are the major national and regional parties in India? Why have social movements come to occupy large role in politics?

Outcomes of Democracy : Can or should democracy be judged by its outcomes? What outcomes can one reasonably expect of democracies? Dies democracy in India meet these expectations? Has democracy led to development, security and dignity for the people? What sustains democracy in India?

Challenges to Democracy : Is the idea of democracy shrinking? What are the major challenges to democracy India? How can democracy be reformed and deepened? What role can an ordinary citizen play in deepening democracy?

What is democracy ? Why democracy? : What are the different ways of defining democracy? Why has democracy become the most prevalent form of government in our times? What are the alternatives to democracy? Is democracy superior to its available alternatives? Must every democracy have the same institutions and values?

Designing of Democracy in India: How and why did India become a democracy? How was the Indian constitution framed? What are the salient features of the Constitution? How is democracy being constantly designed and redesigned in India?

Electoral Politics in Democracy : Why and how do we elect representatives? Why do we have a system of competition among political parties? How has the citizens' participation in electoral politics changed? What are the ways to ensure free and fair elections?

Institutions of Parliamentary Democracy : How is the country governed? What does Parliament do in our democracy? What is the role of the President of India, the Prime Minister and the Council of Ministers? How do these relate to one another?

Citizens' Rights in Democracy : Why do we need rights in a constitution? What are the Fundamental Rights enjoyed by the citizen under the Indian constitution? How does the judiciary protect the Fundamental Rights of the citizen? How is the independence of the judiciary ensured?

ECONOMICS

Understanding Economics

The Story of Development : The traditional notion of development; National Income and pre-capita income, Growth of NI-critical appraisal of existing development indicators (PCI, IMR, SR ad other income and health indicators). The need for health and educational development; Human Development Indicators (in simple and brief as a holistic measure of development). The approach to this theme. Use case study of three states (Kerala, Punjab and Bihar) or take a few countries (India, China, Sri Lanka & one developed country).

The role of Service sector in Indian Economy : What is service sector (through examples) Importance of Service Sector in generating employment and income to the nation (with the help of a few case studies); Growth of Service Sector in India; India as a major service provider to the world.

Money and Financial System : Role of money in an economy; Historical origin; Formal and informal financial institutions for savings and credit – General Introduction; Select one formal institution such as a nationalized commercial bank and a few informal institutions; Local money lenders, landlords, self help groups.

Globalisation : What is Globalisation (through some simple examples); How India is being globalised and why; Development Strategy prior to 1991. Economic Reforms 1991; Strategies adopted in reform measures (easing of capital flows; migration, investment flows); Different perspectives on globalization and its impact on different sectors; political Impact of globalization.

Consumer Awareness : How consumer is exploited (one or two simple case studies) factors causing exploitation of consumers; Rise of consumer awareness; how a consumer should be in a market; role of government in consumer protection.

The Economic Story of Palampore : Economic transactions of Palampore and its interaction with the rest of the world through which the concept of production (including three factors of production (land, labour and capital) can be introduced.

People as Resource : Introduction of how people become resource / asset; economic activities done by men and women; unpaid work done by women; quality of human resource; role of health and education.

Poverty as a challenge facing India : Who is poor (through two case studies one rural one urban); indicators; absolute poverty (not as a concept but through a few simple examples) – Why people are poor; unequal distribution of resources; steps taken by government for poverty alleviation.

Food Security : Source of Food grains – variety across the nation-famine in the past-the need for self sufficiency role of government in food security-procurement of food grains-overflowing of granaries and people without food-public distribution system-role of cooperatives in food security (food grains, milk and vegetables ration shops, cooperative shops, two-three examples as case studies).

HISTORY

French Revolution

- Ø The ancient Regime and its crises.
- Ø The Social forces that led to the revolution
- Ø The different revolutionary groups and ideas of the time
- Ø The legacy

Rise of Nazims

- Ø The growth of social democracy
- Ø The crises in Germany
- Ø The basis of Hitler's rise to power
- Ø The ideology of Nazism
- Ø The Impact of Nazims

Forest Society and Colonialism:

- Ø Relationship between forests and livelihoods
- Ø Changes in forest societies under colonialism

Farmers and peasants

- Ø History of the emergence of different forms of farming and peasant societies.
- Ø Change within rural economies in the modern world.

Sports and Politics

- Ø The Story of Cricket
- Ø The emergence of Cricket as an English Sport
- Ø Cricket and colonialism
- Ø Cricket Nationalism and de-colonialization.

Nationalism in Europe

- Ø The growth of nationalism in Europe after the 1830s
- Ø The ideas of Giuseppe Mazzini etc.
- Ø General Characteristics of the movements in Poland, Hungary, Italy Germany and Greece.

Nationalism in India : Civil Disobedience Movement

- Ø First world war, Khilafat and Non-cooperation
- Ø Salt Satyagraha
- Ø Movement of peasants, workers, tribals
- Ø Activities of different political groups

Industrilization 1850s – 1950s

- Ø Contrast between the form of industrilization in Britain and India
- Ø Relationship between handicrafts and industrial production, formal and informal sectors
- Ø Livelihood of workers. Case studies : Britain and India

Trade and Globalization

- Ø Expansion and integration of the world market in the nineteenth and early twentieth century
- Ø Trade and economy between the two wars
- Ø Shifts after the 1950s
- Ø Implications of globalization for livelihood patterns

Print Culture and nationalism

- Ø The History of Print in Europe
- Ø The growth of press in nineteenth century India
- Ø Relationship between print culture, public debates and politics

GEOGRAPHY

Contemporary India-I

Ø **India Size and location:** Physical Features of India, location, relief, structure, major physiographic units.

Ø **Climate:** Factors influencing the climate; monsoon-its characteristics, rainfall and temperature distribution; season; climate and human life.

Ø **Drainage:** Major rivers and tributaries, lakes and seas, role of rivers in the economy, pollution of rivers, measures to control river pollution.

Ø **Natural Vegetation:** vegetation types, distribution as well as altitudinal variation, need for conservation and various measures.

Ø **Wildlife:** major species, their distribution, need for conservation and various measures.

Ø **Population: Size**, distribution, age-sec composition, population change migration as a determinant of population change, literacy, health, occupational structure and national population policy: adolescents as under-served population group with special needs.

Ø **Resources:** Types – natural and human; need for resource planning.

Ø   **Natural Resources:** Land as a resource soil and distribution; changing land-use pattern; land degradation and conservation measures.

Ø   **Agriculture:** Types of farming, major crops, cropping pattern, technological and institutional reforms; their impact; contribution of Agriculture to national economy – employment and output.

Ø   **Water resources:** Sources, distribution, utilization, multi-purpose projects, water scarcity, need for conservation and management, rainwater harvesting (One case study to be introduced).

Ø   **Mineral Resources:** Types of minerals, distribution, use and economic importance of minerals conservation.

Ø   **Power Resources:** Types of power resources conventional and non-conventional, distribution and utilization and conservation.

Ø   **Manufacturing Industries:** Types spatial distribution, contribution of industries to the national economy, industrial pollution and degradation of environment, measures to control degradation (one case study to be introduced).

Ø   Transport, communication and trade.

Ø   Disaster Management
- Tsunami
- Safer Construction Practices
- Survival Skills
- Alternate Communication Systems during disasters
- Sharing Responsibility
- Man Made Disasters – Nuclear, Biological and Chemical
- Common Hazards-Prevention and Mitigation
- Community Based Disaster Management

MATHEMATICS

NUMBER SYSTEMS

1. Real Numbers: Review of representation of natural numbers, integers, rational numbers on the number line. Representation of terminating / non-terminating recurring decimals, on the number line through successive magnification. Rational numbers as recurring / terminating decimals.

Examples of nonrecurring / non terminating decimals such as $\sqrt{2}$, $\sqrt{3}$, $\sqrt{5}$ etc. Existence of non-rational numbers (irrational-numbers) such as $\sqrt{2}$, $\sqrt{3}$, and their representation on the number line. Explaining that every real number is represented by a unique point on the number line and conversely, every point on the number line represents a unique real number.

Existence of $\sqrt{x}$, for a given positive real number x (visual proof to be emphasized). Definition of nth root of a real number.

Rationalization (with precise meaning) of real numbers of the type $\dfrac{1}{a+b\sqrt{x}}$ & $\dfrac{1}{\sqrt{x}+\sqrt{y}} - \dfrac{1}{\sqrt{x}+\sqrt{y}}$ (and their combinations) where x and y are natural number and a, b are integers.

Recall of laws of exponents with integral powers. Rational exponents with positive real bases (to be done by particulars cases, allowing learner to arrive at the general laws).

2. **Euclid's division lemma, Fundamental Theorem of Arithmetic-** Statements after reviewing work done earlier and after illustrating and motivation through examples, Proof of results- irrationality of $\sqrt{2}, \sqrt{3}, \sqrt{5}$ etc. Decimals expansions of rational numbers in terms of termination/ non-termination recurring decimals.

ALGEBRA

1. Polynomials: Definition of a polynomial in one variable, its coefficients, with examples, coefficients of a polynomial, terms of a polynomial and zero of the polynomials. Degree of a polynomial. Zero polynomial, constant polynomial, linear , quadratic, cubic polynomials; monomials, binomials trinomials. Factors and multiples. Zeros/roots of a polynomial/equation. State and motivate the Remainder Theorem, with examples and analogy to integers. Statement and proof of the Factor Theorem. Factorization of $ax^2 +bx + c, a \neq 0$ where a, b, c are real numbers, and of cubic polynomials using the Factor Theorem.

Recall of algebraic expressions and identities. Further identities of type $(x+y+z)^2 = x^2 + y^2 + z^2$ $2xy + 2yz + 2zx$, $(x \pm y)^3 = x^3 \pm y^3 \pm 3xy (x \pm y)$

$X^3 \pm y^3 = (x \pm y)(x^2 \pm xy + y^2), x^3 + y^3 + z^3 - 3xyz = (x+y+z)(x^2+y^2+z^2-xy-yz-zx)$ and their use in factorization polynomials. Simple expressions reducible to these polynomials.

Zeros of polynomial. Relationship between zeros and coefficients of a polynomial with particular reference to quadratic polynomials. Statement and simple problems on division algorithm for polynomials with real coefficients.

2. Linear Equations in Two Variables: Recall of linear equations in one variable. Introduction to the equation in two variables. Prove that a linear equation in two variables has infinitely many solutions and justify their being written as ordered pairs of real numbers, plotting them and showing that they seem to lie on a line. Examples, problems from real life including problems on Ratio and Proportion and with algebraic and graphical solutions being done simultaneously.

Pair of Linear Equations in two variables: Pair of linear equations in two variables and their graphical solution. Geometric representation of different possibilities of solutions inconsistency.

Algebraic conditions for number of solutions. Solution of pair of linear equations in two variables algebraically – by substitution, by elimination and by cross multiplication method. Simple situational problems must be included. Simple problems on equations reducible to linear equations.

3. Quadratic Equations: Standard form of a quadratic equation $ax^2+bx+c=0$, $(a \neq 0)$. Solution of the quadratic equations (only real roots) by factorization, by completing the square and by using quadratic formula. Relationship between discriminant and nature of roots. Problems related to day to day activities to be incorporated.

4. Arithmetic progressions: Motivation for studying Arithmetic Progression. Derivation of standard results of finding the nth term and sum of first n terms of an Arithmetic Progression and their application in solving daily life problems.

COORDINATE GEOMETRY

1. Coordinate Geometry : The Cartesian plane, coordinates of a point, names and terms associated with the coordinate plane, notations, plotting points in the plane, graph of linear equations as examples; focus on linear equations of the type $ax + by + c = 0$ by writing it as $y = mx + c$ and linking with the chapter on linear equations in two variables.

Lines (In two-dimensions): Review the concepts of coordinate geometry done earlier including graphs of linear equations. Awareness of geometrical representation of quadratic polynomials. Distance Formula between two points and section formula (internal division and external division). Area of a triangle.

GEOMETRY

1. Introduction to Euclid's Geometry: History - Euclid and geometry in India. Euclid's method of formalizing observed phenomenon into rigorous mathematics with definitions, common / obvious notions, axioms / postulates and theorems. The

five postulates of Euclid. Equivalent versions of the fifth postulate. Showing the relationship between axiom and theorem.

For example:

1. (Axiom) Given two distinct points, there exists once and only one line through them.
2. (Theorem) (Prove) two distinct lines cannot have more than one point in common.

2. Lines and Angles

1. (Motivate) If a ray stands on a line, then the sum of the two adjacent angles so formed is 180° and the converse.
2. (Prove) If two lines intersect, the vertically opposite angles are equal.
3. (Motivate) Results on corresponding angles, alternate angles, interior angles when a transversal intersects two parallel lines.
4. (Motivate) Lines, which are parallel to a given line, are parallel.
5. (Prove) The sum of the angles of a triangle is 180°
6. (Motivate) If a side of a triangle is produced, the exterior angle so formed is equal to the sum of the two interiors opposite angles.

3. Triangles

1. (Motivate) Two triangles are congruent if any two sides and the included angle of one triangle is equal to any two sides and the included angle of the other triangle (SAS Congruence).
2. (Prove) Two triangles are congruent if any two angles and the included side of one triangle is equal to any two angles and the included side of the other triangle (ASA Congruence).
3. (Motivate) Two triangles are congruent if the three sides of one triangle are equal to three sides of the other triangle (SSS congruence).
4. (Motivate) Two right triangles are congruent if the hypotenuse and a side of one triangle are equal (respectively) to the hypotenuse and a side of the other triangle (RHS congruence rule).
5. (Prove) The angle opposite to equal sides of a triangle are equal.
6. (Motivate) The sides opposite to equal angles of a triangle are equal.
7. (Motivate) Triangle inequalities and relation between angle and facing side inequalities in triangles.

Definition examples, counter examples of similar triangles.

8. (Prove) If a line is drawn parallel to one side of a triangle to intersect the other two side in distinct points, the other two sides are divided in the same ratio.
9. (Motivate) If a line divides two sides of a triangle in the same ratio, the line is parallel to the third side.
10. (Motivate) Mid-point theorem as a special case of (ix)
11. (Motivate) If in two triangles, the corresponding angles are equal, their corresponding sides are proportional and the triangles are similar.
12. (Motivate) If the corresponding sides of two triangles are proportional, their corresponding angles are equal and the two triangles are similar.
13. (Motivate) If one angle of triangle is equal to one angle of another triangle and the sides including these angles are proportional, the two triangles are similar.

14. (Motivate) If perpendicular is drawn from the vertex of the right angle of a right triangle to the hypotenuse, the triangles on each side of the perpendicular are similar to the whole triangle and to each other.
15. (Prove) The ratio of the areas of two similar triangles is equal to the ratio of the square on their corresponding sides.
16. (Prove) In a right triangle, the square on the hypotenuse is equal to the sum of the squares on the other two sides.
17. (Prove) In a triangle, if the square on one side is equal to sum of the squares on the other two sides, the angles opposite to the first side is a right triangle.

4. Quadrilaterals

1. (Prove) The diagonal divides a parallelogram into two congruent triangles.
2. (Motivate) In a parallelogram opposite sides are equal, and conversely.
3. (Motivate) in a parallelogram opposite angles are equal, and conversely.
4. (Motivate) a quadrilateral is a parallelogram if a pair of its opposite sides is parallel and equal.
5. (Motivate) in a parallelogram, the diagonals bisect each other and conversely.
6. (Motivate) in a triangle, the line segment joining the mid points of any two sides is parallel to the third side and (motivate) its converse) (Mid-point theorem).

5. Area

Review concept of area, recall area of rectangle.

1. (Prove) Parallelograms on the same based and between have the same area.
2. (Motivate) triangles on the same base and between the same parallels are equal in area and its converse.

6. **Circles:** Through examples, arrive at definitions of circles related concept, radius, circumference, diameter, chord, arc, subtended angle.

1. (Prove) Equal chords of a circle subtend equal angles at the centre and (motivate) its converse.
2. (Motivate) the perpendicular from the center of a circle to a chord bisects the chord and conversely the line drawn through the center of a circle to bisect a chord is perpendicular to the chord.
3. (Motivate) There is one and only one circle passing through three given non collinear points.
4. (Motivate) Equal chords of a circle (or of congruent circles) are equidistant from the center(s) (or their respective centres and conversely.
5. (Prove) The angle subtended by an arc at the center is double the angle subtended by it at any point on the remaining part of the circle.
6. (Motivate) Angles in the same segment of a circle are equal.
7. (Motivate) If a line segment joining two points subtended equal angle at two other points laying on the same side of the line containing the segment, the four points lie on a circle.
8. (Motivate) The sum of the either pair of the opposite angles of a cyclic quadrilateral is 180° and its converse.

    Tangents to a circle motivated by chords drawn from points coming closer to the point.

9. (Prove) The tangent at any point of a circle is perpendicular to the radius through the point of contact.
10. (Prove) The lengths of tangents drawn from an external point to circle are equal

MENSURATION

1. **Areas:** Area of a triangle using Hero's formula (without proof) and its application in finding the area of a quadrilateral.

2. **Surface Areas and Volumes:**
   (i)   Surface areas and volumes of cubes, cuboids, spheres (including hemispheres) and right circular cylinders/cones.
   (ii) Problems on finding surface areas and volumes of combinations of any two of the following : cubes cuboids, spheres, hemispheres and right circular cylinders / cones. Frustum of a cone.
   (iii) Problems involving converting one type of metallic solid into another and other mixed problems. (Problems with combination of not more than two different solid be taken).

3. **Areas related to circle:** Motivate the area of a circle; area of sectors and segments of a circle. Problems based on areas and perimeter / circumference of the above said plane figures. (In calculating area of segment of a circle, problems should be restricted to central angle of 60°, 90° and 120° only. Plane figures involving triangles, simple quadrilaterals and circle should be taken).

STATISTICS AND PROBABILITY

1. **Statistics :** Introduction to statistics: Collection of data, presentation of data-tubular form, ungrouped/grouped, bar graphs, histograms (with varying base length), frequency polygons, qualitative analysis of data to choose the correct form of presentation for the collected data. Mean, median, mode of ungrouped data.
2. Mean, Median and Mode of grouped data (bimodal situation to be avoided). Cumulative frequency graph.
3. **Probability:** History, Repeated experiments and observed frequency approach to probability. Focus is on empirical probability. (A large amount of time to be devoted to group and to individual activities to motivate the concept; the experiments to be drawn from real-life situations, and from examples used in the chapter on statistics).

4. Classical definition of probability. Simple problems on single events, not using set notation.

TRIGONOMETRY

1. Introduction to Trigonometry: Trigonometric ratios of an acute angle of a right-angled triangle. Proof of their existence (well defined); motivate the ratios, whichever are defined at 0° & 90°, Values (with proofs) of the trigonometric ratios of 30°, 45° and 60°. Relationships between the ratios.

2. **Trigonometric identities :** Proof and applications of the identity $\sin^2 A + \cos^2 A = 1$. Only simple identities to be given. Trigonometric ratios of complementary angles.

3. Heights and Distances: Simple and believable problems on heights and distances. Problems should not involved more than two right triangles. Angles of elevation / depression should be only 30°, 45° and 60°

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SYLLABUS OF INDO ISLAMIC CULTURE

A. **Muslims in India : An Overview**   06 Marks

1. **Famous Rulers of Sultanat & Mughal Empire:**
   Qutubuddin Aibak, Alauddin Khilji, Firoz Shah Tughlaq, Zahiruddin Babar, Sher Shah Suri, Jalaluddin M. Akbar, Aurangzeb Alamgir.

2. **Indo – Islamic Architecture (Famous Monuments):**
   Qutub Minar, Golcanda Monuments, Red Fort, Taj Mahal, Jama Masjid, The Gol Gumbaz, Atala Masjid.

3. **Religious Co-existence: Select Sufism Tradition and Bhakti Movement:**
   Amir Khusru, Khwaja Gesu Daraz, Khwaja Moinuddin Chishti, Baba Farid Ganje Shakkar, Khwaja Nizamuddin Awliya, Sheikh Ahmad Sirhindi, Shah Waliullah, Guru Nanak Dev, Kabir Das, Mira Bai, Tulsidas.

4. **Contribution of Muslims in the Indian Freedom Movement:**
   Bahadur Shah Zafar, Tipu Sultan, Maulana Mahmoodul Hasan, Ali Brothers, Maulana Hasrat Moohani, Maulana Abul Kalam Azad.

B. **Sir Syed and Aligarh Movement:**   04 Marks
   a. Life and works of Sir Syed
   b. Literary Contribution of Sir Syed
   c. Architect of Educational Reforms : Bridging tradition and Modernity; Establishment of AMU

SYLLABUS OF GENERAL KNOWLEDGE

1. Current Affairs   05 Marks
2. Awards and Honours (Civilian and Nobel)
3. Games and Sports
4. Religious Scriptures

SUGGESTED BOOKS :
- Text Book of History Class IX – X
- Sir Syed by Sir Syed Academy (A Short Introduction – AMU Centenary Year 2020).
- Qazi Zainul Aabideen, Tarikh e Millat
- Knowing India : A Transforming Story by D.K. Hari and D.K. Hema Hari
- India 2024 Current Affairs by Rajendra Prasad
- Glimpse of Scriptures of Religions of Indian Origin by Ashok K. Sinha

SYLLABUS OF ENGLISH

(05 marks)

1. Subject - Verb Agreement
2. Use of Prepositions / Conjuctions
3. Active and Passive Voice
4. Vocabulary & Usage
5. Use of Articles
6. Idioms & Phrasal Verbs
7. Detecting errors in Sentences