

NATIONAL UNIVERSITY



First Year Syllabus Department of Chemistry

Four Year B.Sc Honours Course
Effective from the Session : 2013–2014

National University
Subject: Chemistry
Syllabus for Four Year B.Sc Honours Course
Effective from the Session: 2013-2014

Year wise Papers and marks distributions

FIRST YEAR

Paper Code	Paper Title	Marks	Credits
212801	Physical Chemistry-I	75	3
212803	Fundamentals of Organic Chemistry	75	3
212805	Fundamentals of Inorganic Chemistry	75	3
212806	Chemistry Practical: Qualitative inorganic analysis, inorganic preparations and elementary crystal chemistry	75	3
213709	Fundamentals of Mathematics	100	4
213711	Calculus-I	50	2
212707	Physics-I (Mechanics, Properties of Matter, Waves & Optics)	100	4
212709	Physics-II (Heat, Thermodynamics and Radiation)	50	2
211501	History of the Emergence of Independent of Bangladesh	100	4
	Total =	700	28

Detailed Syllabus

Paper Code	212801	Marks: 75	Credits: 3	Class Hours: 45
Paper Title	Physical Chemistry-I			

1. **State of Matter:** Microscopic and macroscopic system, properties of molecules, potential and kinetic energy of molecules, degrees of freedom of motion; translational rotational and vibrational energy of systems, principle of equipartition of energy, state of aggregation of matter.
2. **Gaseous State:** properties of gases, the gas laws; ideal and real gases, ideal gas equation, kinetic theory and its application to ideal gases, pressure of ideal gases, boltzmann distribution of molecular energies, deviation from ideal behaviour, vander Walls equation, critical constants; principle of corresponding states, collision number, mean free path, dalton's law of partial pressure.
3. **Liquids and Solutions:** Physical properties and molecular structure, surface tension measurement of surface tension, viscosity, poiscuille's equation, measurement viscosity, molar refractivity and dipole moment, measurement vapour pressure, dependence of vapour pressure on temperature variation, solution, solubility, solubility product, molecular solution, ionic solution, units of concentration, raoult's law, ideal and nonideal solutions, colligative properties of solution, effect of electrolytes on colligative properties. henry's law determination of molecular weight by measuring colligative properties.
4. **Chemical Equilibrium:** Equilibrium in chemical reactions and the equilibrium law; k_p , k_c , and k_x measurements, degree of dissociation; effects of temperature, pressure and concentration changes of equilibrium, principle of Le Chatelier and Braun, Ostwald dilution law, dissociation of solid, solubility product, common ion effect, p_h and buffer solution.
5. **Energetics in Chemistry:** Work and heat; internal energy, the first law of thermodynamics, system, surrounding and boundary, state function and exact differentials, enthalpy, work of expansions reversible and adiabatic expansions, heat capacities at constant pressure and constant volume, Joule-Thompson's effect, inversion temperature enthalpy changes in various chemical and physical processes; hess's law and its application, born-haber cycle; bond enthalpy.
6. **Rates of Chemical reaction:** Rate of reaction, rate equation, order and rate constant, measurement of reaction rates, determination of order and rate constant, elementary and complex reaction, molecularity, effect of temperature on the rate of reaction. activation energy.

Book Recommended:

1. Physical chemistry, PW atkins
2. Physical Chemistry, G W Castellan
3. A text Book of Physical Chemistry, S Glasstone
4. Principles of Physical Chemistry, Haque & Nawab (Revised by Haque & Mollah)

5. General Chemistry, D Ebbing

Paper Code	212803	Marks: 75	Credits: 3	Class Hours: 45
Paper Title	Fundamentals of Organic Chemistry			

- 1. Bonding in Organic Compounds:** Atomic orbitals; covalent bonds; sigma and pi bonds, hybridization of orbitals; shapes of molecules, classification of organic compounds based on their functional groups, polar and nonpolar molecules, nomenclature of organic compounds. formation of carbocations, carbanion, free radicals and their stabilities. homologous series.
- 2. Hydrocarbons and their Classification:**
 - 2.1 Alkanes:** Structure; nomenclature, sources; preparation and reaction of alkanes and cycloalkanes, conformation of n-butane and cyclohexane, Wurtz reaction. free radical mechanism of halogenation. CFC.
 - 2.2 Alkenes:** Structure and orbital picture and sources, nomenclature, preparation and reaction of alkenes, geometrical isomerism of alkenes, cis-trans isomer and E.Z systems, mechanism of electrophilic addition, Markowikov's and Anti Markowniov's rule, stereo specific reactions.
 - 2.3 Dienes:** Structure and orbital picture, nomenclature; preparation and rections of dienes, diels-Alder reaction; polymerization, conjugated dines.
 - 2.4 Alkynes:** Structure and orbital picture; nomenclature, preparation, reactions of alkynes, electrophilic addition reaction, acidity of alkynes.
- 3. Alkyl Halides:** Structure, nomenclature; preparation and properties of alkyl halides; mechanism of nucleophilic substitution reaction and elimination reactions, grignard reagent, its synthesis and application.
- 4. Alcohols:** Structure, nomenclature, classification of alcohols, preparation, reactions of monohydric, dihydric and trihydric alcohols. reactions of alcohols, dehydration, substitution, oxidation and reduction. acidity and basicity of alcohols.
- 5. Ethers and Epoxides:** Nomenclature, preparation, reactions of ethers; ethers as protecting groups; crownethers.
- 6. Aldehydes and Ketones:** Nomenclature, orbital picture of carbonyl group. general methods of preparation and reactions of aldehydes and ketones; nucleophilic addition reaction of carbonyl compounds.
- 7. Carboxylic Acids:** Structure and orbital picture; nomenclature; acidity, resonance effect and inductive effect on acidity, general methods of preparation and reactions of carboxylic acids

Books Recommended:

1. Organic Chemistry, R.T. Mirrison and R N Boyd, Sixth Edition
2. Organic Chemistry, IL Finar, Vol.I. Longmans, 6th Ed.
3. Modern Organic Chemistry, R.W Griffin Jr, McGraw Hill
4. Principles of Organic Chemistry, J. English, H.G Cassidy and R.I Baird. McGraw Hill
5. Basic Principles of Organic Chemistry, J.D. roberts and M.C Casserio. W.W. Benjamin Inc.

6. Organic Chemistry, McMunry. Broks-Cooles.

Paper Code	212805	Marks: 75	Credits: 3	Class Hours: 45
Paper Title	Fundamentals of Inorganic Chemistry			

1. **Atomic Structure:** Atomic nucleus, fundamental particles, nuclear forces, nuclear binding energy, nuclear stability, magic numbers, radioactivity, isotopes, atomic mass, mass spectrometry, cathode rays, mass and charge of an electron, α -particle scattering, Rutherford atom model, Planck's quantum theory, Bohr's theory for hydrogen atom, electromagnetic spectrum, absorption and emission spectra, emission spectrum of atomic hydrogen, quantum numbers, atomic orbitals, shapes and orientation of s, p and d orbitals, aufbau principle, Pauli exclusion principle.

2. **Periodic Classification:** Periodic law, periodic table, prediction of elements, naming of all elements, elements in groups, periods and blocks, electronic configuration of groups and periods, metals, nonmetals and metalloids, diagonal relationship, periodicity of atomic and molecular properties e.g. ionization energy, electron affinity, electronegativity, effective nuclear charge, atomic/ionic radii, etc., usefulness and limitation of periodic table.

3. **Chemical Bonds:** Chemical bond, types of chemical bonds, ionic bond: energetic of ionic bond formation, properties of ionic compounds, factors influencing the formation of ionic bond, radius ratio rule, lattice energy, Fajan's rule, covalent bond: sigma and pi bond, polar and non-polar covalent bonds, properties associated with covalent compounds, Lewis formulation, formal charge, valence shell electron pair repulsion (VSEPR) theory and molecular geometry.

4. **Acids and Bases:** Concepts on acids and bases, conjugate acids and bases, neutralization reactions, acid - base strength, leveling effect, hard and soft acids and bases, hard and soft acids and bases in qualitative analysis.

6. **Types of Reactions:** Oxidation -reduction reactions, oxidizing and reducing agents, assigning oxidation states to bonded atoms, redox half reactions, rules for balancing redox reactions, Ellingham diagram, standard reduction potential, the electrochemical series, disproportionation reactions, comproportionation reaction, addition reaction, elimination reactions, double decomposition reactions, substitution reactions, acid - base reactions.

Books Recommended:

1. General Chemistry, D. D. Ebbing, Houghton Mifflin Co.
2. Chemistry – The Molecular Nature of Matter and Change, M. Silberberg, WCB/McGraw-Hill.
3. General Chemistry, J. B. Russel, International Edition, McGraw-Hill Inc.
4. Modern Inorganic Chemistry, R. D. Madan, S. Chand & Company Ltd.
5. Basic Inorganic Chemistry, F. A. Cotton, G. Wilkinson, and P. L. Gaus, John Willey & Sons.
6. Principles of Descriptive Inorganic Chemistry, G. Wulfsberg, University Science Books, Mill Valley.

Paper Code	212806	Marks: 75	Credits: 3	Class Hours: 45
Paper Title	Chemistry Practical: Qualitative inorganic analysis, inorganic preparations and elementary crystal chemistry			

1. **Safety:** The twelve rules of safety, safety in the laboratory.

2. **Purification and Preparation of Inorganic Compounds:**

- (i) Purification of commercial NaCl by recrystallization and salting out processes,
- (ii) Preparation of ferrous sulphate $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$, Mohr's salt $[\text{FeSO}_4 \cdot (\text{NH}_4)_2\text{SO}_4]$.

6H₂O], potash alum [K₂SO₄ · Al₂(SO₄)₃ · 24H₂O], chrome alum [K₂SO₄ · Cr₂(SO₄)₃ · 24H₂O], sodium carbonate Na₂CO₃.

3. **Model Making:** Seven crystal systems model.
4. **Systematic Semimicro Qualitative Analysis of Inorganic Salts:** Identification of inorganic basic and acid radicals, 5 radicals in a mixture taking at least two from both ion types.

Books Recommended:

1. A Text-Book of Macro and Semimicro Qualitative Inorganic Analysis, A. I. Vogel, 4th edition, Longmans, Green and Co. Ltd.
2. Semimicro Qualitative Analysis, F. J. Welcher and R. B. Hahn, D. Van Nostrand Co. Inc.
3. Qualitative Analysis, V. Alexeyev, Mir Publishers.

Paper Code	213709	Marks: 100	Credits:4	Class Hours: 60
Paper Title	Fundamentals of Mathematics			

1. Real Number System: Field and order properties, natural numbers, integers and rational numbers, absolute value and their properties, basic inequalities.

2. Complex Number System: Field of complex numbers, De Moivre's theorem and its applications.

3. Theory of equations: Relations between roots and coefficients, symmetric functions of roots, sum of the powers of roots, synthetic division, Des Cartes' rule of signs, multiplicity of roots, transformation of equations.

4. Matrices and Determinants:, Notion of matrix. types of matrices. algebra of matrices. determinant function and its properties. minors, cofactors, expansion and evaluation of determinants. elementary row and column operations and row-reduced echelon matrices. invertible matrices. diagonal, triangular and symmetric matrices.

5. System of Linear Equations: System of linear equations (homogeneous and non-homogeneous) and their solutions. gaussian elimination, application of matrices and determinants for solving system of linear equations. applications of system of equations in real life problems.

6. Vector Spaces: Euclidean n-space. real vector spaces. subspaces. linear combination of vectors. linear dependence of vectors. basis and dimension. linear transformations. matrix representation of linear transformation. kernel and image. eigenvalues and eigenvectors.

7. Two-dimensional Geometry: Transformation of coordinates, pair of straight lines (homogeneous second degree equations, general second degree equations representing pair of straight lines, angle between pair of straight lines, bisectors of angle between pair of straight lines), general equations of second degree (reduction to standard forms, identifications, properties and tracing of conics).

8. Three-dimensional Geometry: Three-dimensional coordinates, distance, direction cosines and direction ratios. planes and straight lines. vectors in plane and space. algebra of vectors. scalar and vector product. vector equations of straight lines and planes.

Books Recommended :

1. S. Bernard & J M Child- Higher algebra.
2. Howard Anton & Chris Rorres – Elementary Linear Algebra with Application.
3. Khosh Mohammad- Analytic Geometry and Vector Analysis.
4. Md. Abdur Rahman – Linear Algebra.

Paper Code	213711	Marks: 50	Credits:2	Class Hours: 30
Paper Title	Calculus-I			

1. Functions & their graphs : Polynomial and rational functions, logarithmic and exponential functions, trigonometric functions & their inverses, hyperbolic functions & their inverses, combinations of such functions.

2. Limit and continuity: Definitions and basic theorems on limit and continuity. Limit at infinity & infinite limits, Computation of limits.

3. Differentiation: Tangent lines and rates of change. Definition of derivative. One-sided derivatives. Rules of differentiation . Successive differentiation. Leibnitz's theorem. Related rates. Linear approximations and differentials.

4. Applications of Differentiation: Mean value theorem. Maximum and minimum values of functions. Concavity and points of inflection. Optimization problems.

5. Integration: Antiderivatives and indefinite integrals. Techniques of integration. Definite integration using antiderivatives. Fundamental theorems of calculus. Basic properties of integration. Integration by reduction.

6. Applications of Integration: Arc length. Plane areas. Surfaces of revolution. Volumes of solids of revolution. Volumes by cylindrical shells. Volumes by cross sections.

7. Approximation and Series: Taylor polynomials and series. Convergence of series. Taylor's series. Taylor's theorem and remainders. Differentiation and integration of series.

Books Recommended:

1. Howard Anton -Calculus (7th and forward editions).
2. E.W. Swokowski - Calculus with Analytic Geometry.
3. Md. A Matin & B Chakraborty, - Diferential Calculus.

Paper Code	212707	Marks: 100	Credits: 4	Class Hours: 60
Paper Title	Physics-I (Mechanics, Properties of Matter, Waves & Optics)			

1. **Vector Analysis:** Vectors and scalars, Addition and multiplication of vectors, Triple scalar & vector products, Derivatives of vectors, Gradient, divergence and curl-their physical significance, Theorems of Gauss, Green & Stoke's.
2. **Work, Energy and Power:** Work energy theorem, Conservation of energy and linear momentum, Conservative and non-conservative forces and systems, Conservation of energy and momentum, Centre of mass, Collision problems.
3. **Rotational Motions:** Rotational variables, Rotation with constant angular acceleration, Relation between linear and angular kinematics, Torque on a particle, Angular momentum of a particle, kinetic energy of rotation and moment of inertia. Combined translational and rotational motion of a rigid body, Conservation of angular momentum.
4. **Gravitation:** Centre of gravity of extended bodies, Gravitational field and potential their calculations, Determination of gravitation constant and gravity, Compound and kater's pendulums, Motion of planets and satellites, Escape velocity.
5. **Elasticity:** Moduli of elasticity, poission's ratio, Relations between elastic constants and their determination, Cantilever.
6. **Surface Tension:** Surface tension as a molecular phenomenon, Surface tension and surface energy, Capillary rise or fall of liquids, Pressure on a curved membrane due to surface tension, Determination of surface tension of water, mercury and soap solution, Effect of temperature.
7. **Fluid Dynamics:** Viscosity and coefficient of viscosity, Poiseulle's equation, Determination of the coefficient of viscosity of liquid by Stoke's method, Bernoulli's theorem and its applications, Toricelli 's theorem, Venturimeter.
8. **Waves:** Mechanical waves, types of waves, travelling waves. The superposition principle. Wave speed, Power and intensity in wave motion. Interference of waves, Standing Waves and resonance.
9. **Oscillatory Motions:** Simple harmonic motion, Combination of harmonic motions, Damped harmonic motion, Forced oscillations and resonance.
10. **Geometrical Optics:** Fermat's Principles, Theory of equivalent lenses, Defect of images,

Optical instrument, Dispersion rainbow.

11. **Nature and Propagation of light:** Properties of light, Wave theory and Huygen's Principle, Theories of light.
12. **Interference:** Young's experiment: Bi-prism, Newton's ring.
13. **Diffraction:** Fresnel's and Fraunhofer types, Diffraction through single slit and double slit, diffraction grating, Dispersive and resolving powers of gratings.
14. **Polarization:** Plane, Elliptical and circular Polarizations, Optical, Rotatory dispersion, Polarimeters.

Books Recommended:

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|---|---------------------------------|
| 1. R. S. Halliday, R. Resnick, and J. Walker | : Fundamentals of Physics |
| 2. Halliday, D. and Resnick, R. | : Physics |
| 3. Sears, F.W. , Zimansky, M.W. and Young, H.D. | : University Physics |
| 4. Mathur, D.S. | : Properties of Matter |
| 5. Newman, F.W. and Serale, V.H.L | : General Properties of Matter. |
| 6. A text Book of Light | : Choudhury, Saha & Pramanik |
| 7. Fundamentals of Optics | : F.A. Jenking & H.E. White |
| 8. A text Book of Light | : K.G. Mazumder |
| 9. Principles of Optics | : B.K. Mathur |

Paper Code	212709	Marks: 50	Credits: 2	Class Hours: 30
Paper Title	Physics-II (Heat, Thermodynamics and Radiation)			

1. **Thermometry:** Temperature, Concepts of thermal equilibrium, measurement of low and high temperature: Gas thermometers, Resistance thermometer, Thermocouple, Pyrometry, International temperature scale.
2. **Calorimetry:** Specific heats of solids, liquids and gases by method of mixture with radiation corrections: Newton's Law of cooling, Variations of specific heats, Atomic and molecular heats.
3. **Transmission of Heat:** Thermal conductivity, Determination of thermal conductivities of good and bad conductors.
4. **Thermodynamic Systems:** Concept of internal energy: The first law of thermodynamics, Work and specific heats, Isothermal and adiabatic processes.
5. **The second law of thermodynamics:** Reversible and irreversible processes: Carnot cycle, Efficiency of reversible engines, Absolute thermodynamic temperature scale, Change of phase: Clausius and Clapeyron equation, Porous plug experiment.
6. **Entropy:** Entropy of an ideal gas, Temperature-entropy diagram, Increase of entropy.
7. **Thermodynamic Functions:** The Maxwell's relations, Specific heat equations.
8. **Radiation:** Concept of black body radiation, Kirchhoff's law, Stefan-Boltzmann law, Wien's displacement Law, Rayleigh-Jean's law, Planck's Radiation law, Pyrometers, Temperature of the sun.

Books Recommended:

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| 1. Halliday, D. and Resnick, R. | : Physics |
| 2. A Text Book of Heat | : T. Hossain |
| 3. Principle of Heat, Thermodynamics and Radiation | : M. A. Haque |
| 4. A Text of Heat, Thermodynamics and Radiation | : M. Ishaque & A.M.Z.Islam |
| 5. A Text of Heat, Thermodynamics and Radiation | : Z.I. Bhuiyan & S. Rahman |
| 6. A text Book of Light | : Choudhury, Saha & Pramanik |

7. Heat and Thermodynamics : N. Uddin & A. Kalam
 8. Tap O Tapagati Bijnan : M.A. Jabbar
 9. Heat and Thermodynamics : M. W. Zemansky

Paper Code	211501	Marks: 100	Credits: 4	Class Hours: 60
Paper Title:	History of the Emergence of Independent Bangladesh			

^vaxb evsjv`kfi Afy`kqi BwZnvm

f~wgKv: ^vaxb evsjv`kfi Afy`kqi BwZnvm-cwiwa I cwiwPwZ

1| k I RbMvwôi cwiPq

- K) f~ cOK...wZi ^ewkó" I cÖfve
 L) b,,ZvwË;K MVb
 M) fvlv
 N) ms<...wZi mgš^qevw`Zv I ag©xq mnbkxjZv
 O) Awfbœ evsjvi cwi#cÖw¶Z ZrKvjxb c~e©e½ I eZ©gvb evsjv`kfi
 ^Kxq mËv

2| ALÛ ^vaxb evsjv ivóª MVkbi cÖqvm I Dcgnv`kfi wefw³, 1947

- K) JcwbkewkK kvmb Avgk mvæcÖ`vwqKZvi D™ çe I we~—vi
 L) jvknvi cÖ—ve, 1940
 M) ALÛ ^vaxb evsjv ivóª MVkbi Dk`vM, 1947 I cwiYwZ
 N) cvwK—vb m,,wó, 1947

3| cvwK—vb: ivóªxq KvVvkgv I ^elg"

- K) k>ªxq I cÖv`wkK KvVvkgv
 L) mvgwiK I temvgwiK AvgjvZšž; cÖfve
 M) A_©%bwZK, mvgvwRK I mvs<...wZK ^elg"

4| fvlv Avk`vjb I evOvwji AvZçcwiPq cÖwZôv

- K) gymwjg jxkMi kvmb I MYZvwšž;K ivRbxwZi msMÖvg
 L) Avlqvgx jxkMi cÖwZôv, 1949
 M) fvlv Avk`vjb: cUf~wg I NUbv cÖevn
 N) nK-fvmvbX-tmVnvlqv`©xi hy³d«>U, 1954 mvkji wbe©vPb I cwiYwZ

5| mvgwiK kvmb: AvBqye Lv I Bqvwnqv Lvkbi kvmbvgj (1958-71)

- K) mvgwiK kvmb; msAv I ^ewkó"
 L) AvBqye Lvkbi ¶lgZv `Lj I kvmb; ^ewkó" (ivR%bwZK wbcxob, tgšwjK MYZšž, akg©i
 ivR%bwZK e"envi)
 M) AvBqye Lvkbi cZb I Bqvwnqv Lvkbi kvmb, GK BDwbU wejywßKiY,
 mve©Rxb tfvUvwaKvi, GjGdl (Legal Framework Order)

6| RvZxqZvev`i weKvk I ^vwaKvi Avk`vjb

K) mvs̄<...wZK AvMÖvm†bi wei“†x cÖwZ†iva I evOvwj ms̄<...wZi D³/₄xeb
 L) †kL gywReyi ingv†bi 6-`dv Av†>`vjb
 M) 6-`dv Av†>`vjb†bi cÖwZwμqv, „i“Zi I Zvrch©
 N) AvMiZjv gvgjv, 1968

7| 1969-Gi MYAfy`lvb I 11-`dv Av†>`vjb

K) cUf~wg
 L) Av†>`vjb†bi Kg©m~Px, „i“Zi I cwiYwZ

8| 1970 Gi wbe©vPb, Amn†hvM Av†>`vjb I e¹/₂eÜzi `^vaxbZv †NvIYv

K) wbe©vP†bi djvdj Ges Zv †g†b wb†Z †K†>`ai A`^xK...wZ
 L) Amn†hvM Av†>`vjb, e¹/₂eÜzi 7B gv†P©i fvIY, Acv†ikb mvP©jvBU
 M) e¹/₂eÜzi `^vaxbZv †NvIYv I †MÖdZvi

9| gyw³hyx 1971

K) MYnZ`v, bvix wbh©vZb, kiYv_©x
 L) evsjv†`k miKvi MVb I `^vaxbZvi †NvIYvcĬ
 M) `^Z:ù,Z© cÖv_wgK cÖwZ†iva I msMwVZ cÖwZ†iva (gyw³†dŠR, gyw³evwnbx, †Mwijv I m†šyL hyx)
 N) gyw³hy†x cÖPvi gva`g (`^vaxb evsjv †eZvi †K>`a, we†`kx cÖPvi gva`g I RbgZ MVb)
 O) QvĬ, bvix I mvaviY gvby†li Ae`vb (MYhyx)
 P) gyw³hy†x e,,nrkw³ mg~†ni f~wgKv
 Q) `Lj`vi evwnbx, kvwš—KwguU, Avje`i, Avjkgm, ivRvKvi evwnbx, ivR %obwZK `j I †`kxq
 Ab`vb` mn†hvMx†i `^vaxbZvwe†ivax Kg©KvÛ I eyw×Rrex nZ`v
 R) cvwK`lv†b ew>` Ae`vq e¹/₂eÜzi wePvi I wek!cÖwZwμqv
 S) cÖevmx evOvwj I we†k!i wewfbœ †`†ki bvMwiK mgv†Ri f~wgKv
 T) gyw³hy†x fvi†Zi Ae`vb
 U) †hŠ_ evwnbx MVb I weRq
 V) `^vaxbZv msMÖv†g e¹/₂eÜzi †bZ...Zi

10| e¹/₂eÜz †kL gywReyi ingv†bi kvmbKvj, 1972-1975

K) `^†`k cÖZ`veZ©b
 L) msweavb cÖYqb
 M) hyx weaY`— †`k cybM©Vb
 N) mcwiev†i e¹/₂eÜz nZ`v I Av`wk©K cUcwieZ©b

History of the Emergence of Independent Bangladesh

Introduction: Scope and description of the emergence of Independent Bangladesh. Writing on this topic.

1. Description of the country and its people.

- a. Geographical features and their influence.
- b. Ethnic composition.

- c. Language.
- d. Cultural syncretism and religious tolerance.
- e. Distinctive identity of Bangladesh in the context of undivided Bangladesh.

2. Proposal for undivided sovereign Bengal and the partition of the Sub Continent, 1947.

- a. Rise of communalism under the colonial rule, Lahore Resolution 1940.
- b. The proposal of Suhrawardi and Sarat Bose for undivided Bengal : consequences
- c. The creation of Pakistan 1947 .

3. Pakistan: Structure of the state and disparity.

- a. Central and provincial structure.
- b. Influence of Military and Civil bureaucracy.
- C . Economic , social and cultural disparity

4. Language Movement and quest for Bengali identity

- a. Misrule by Muslim League and Struggle for democratic politics .
- b. The Language Movement: context and phases .
- c. United front of Haque - Vasani - Suhrawardi: election of 1954, consequences.

5. Military rule: the regimes of Ayub Khan and Yahia Khan (1958-1971)

- a. Definition of military rules and its characteristics.
- b. Ayub Khan's rise to power and characteristics of his rule (Political repression, Basic democracy, Islamisation)
- c. Fall of Ayub Khan and Yahia Khan's rule (Abolition of one unit, universal suffrage, the Legal Framework Order)

6. Rise of nationalism and the Movement for self determination .

- a. Resistance against cultural aggression and resurgence of Bengali culture.
- b. Sheikh Mujibur Rahman and the six point movement
- c. Reactions : Importance and significance
- d . The Agortola Case 1968.

7. The mass- upsurge of 1969 and 11 point movement: background, programme and significance.

8. Election of 1970 and the Declaration of Independence by Bangobondhu

- a. Election result and centres refusal to comply
- b. The non co-operation movement, the 7th March , Address , Operation Searchlight
- c. Declaration of Independence by Bangobondhu and his arrest

9. The war of Liberation 1971

- a. Genocide, repression of women, refugees
- b. Formation of Bangladesh government and proclamation of Independence
- c. The spontaneous early resistance and subsequent organized resistance (Mukti Fouz, Mukti Bahini, guerillas and the frontal warfare)
- d. Publicity Campaign in the war of Liberation (Shadhin Bangla Betar Kendra, the Campaigns abroad and formation of public opinion)
- e. Contribution of students, women and the masses (Peoples war)
- f. The role of super powers and the Muslim states in the Liberation war.
- g. The Anti-liberation activities of the occupation army, the Peace Committee, Al-Badar, Al-Shams, Rajakars, pro Pakistan political parties and Pakistani Collaborators , killing of the intellectuals.
- h. Trial of Bangobondhu and reaction of the World Community.
- i. The contribution of India in the Liberation War
- j. Formation of joint command and the Victory
- k. The overall contribution of Bangobondhu in the Independence struggle.

10. The Bangobondhu Regime 1972-1975

- a. Homecoming
- b. Making of the constitution
- c. Reconstruction of the war ravaged country
- d. The murder of Bangobondhu and his family and the ideological turn-around.

mnvqK MÖš'

1. bxnvi iÄb ivq, evOvjxi BwZnvm, †`Ö R cvewjwks, KjKvZv 1402 mvj|
2. mvjvn& Dwİb Avn†g` I Ab`vb` (mæúvw`Z), evsjv†`†ki gyw³ msMÖv†gi BwZnvm 1947-1971, AvMvgx cÖKvkbx, XvKv 2002|

3. wmivRyj Bmjvg (mæúvw`Z), evsjv`k: BwZnvm 1704-1971, 3 LÛ, GwkqvwUK tnmvmvBwU Ae evsjv`k, XvKv 1992|
4. W. nvi`b-Ai-iwk`, evsjv`k: ivRbxwZ, miKvi I kvmbZvwš¿K Dboeqb 1757-2000, wbD GR cvewj`KkÝ, XvKv 2001|
5. W. nvi`b-Ai-iwk`, evOvwji ivóªwPš—v I ^vaxb evsjv`k: Af~`q, AvMvgx cÖKvkbx, XvKv 2003|
6. W. nvi`b-Ai-iwk`, e½eÛzi Amgvß AvZ¥Rxebx cybcv©V, w` BDwbfvwm©wU tçÖm wjwg`UW, XvKv 2013|
7. W. AvZdzj nvB wkejx I W.tgvt gvneyei ingvb, evsjv`k: mvsweavwbK BwZnvm 1773-1972, m~eY© cÖKvkb, XvKv 2013|
8. gybZvwmi gvgyb I RqšÍ Kzgv i vq, evsjv`k: wmwfj mgvR cÖwZôvi msMövg, Aemi, XvKv 2006|
9. AvwZDi ingvb, Amn`hvM Av`vj`bi w`b,wj: gyw³hy`xi cÖ`wZ ce©, mvwnZ` cÖKvk, XvKv 1998|
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