



**TRIPURA UNIVERSITY**  
**(A Central University)**  
**Suryamaninagar-799022**

# **Syllabus**

**Of**

**Four Year Integrated B.A. /B.Sc. B.Ed.  
Course**

**SCHOOL OF EDUCATION**

**2018**

**Structure of B.Sc-B.Ed (Mathematics (Honours))**

**Total Marks = 4850 ( B.Sc : 2850 + B.Ed : 2000 ) ; Credits : 240 ( B.Sc : 160 + B.Ed : 80 )**

<b>SEM</b>	<b>Honours / Major MATHEMATICS(HMAT)</b>							
<b>I</b>	<b>HMAT Code 101 : 100, CH: 4(L)+2(T), Cr: 4 + 2</b>							
<b>II</b>	<b>HMAT Code 201 : 80, CH: 4(L), Cr : 4 HMAT Code 201P : 20, CH: 2(P), Cr : 2</b>							
<b>III</b>	<b>HMAT Code 301 : 80, CH: 4(L), Cr : 4 HMAT Code 301P : 20, CH: 2(P), Cr : 2 HMAT Code 302 : 80, CH: 4(L), Cr : 4 HMAT Code 302P : 20, CH: 2(P), Cr : 2</b>							
<b>IV</b>	<b>HMAT Code 401 : 80, CH: 4(L), Cr : 4 HMAT Code 401P : 20, CH: 2(P), Cr : 2 HMAT Code 402 : 80, CH: 4(L), Cr : 4 HMAT Code 402P : 20, CH: 2(P), Cr : 2</b>							
<b>V</b>	<b>HMAT Code 501 : 80, CH: 4(L), Cr : 4 HMAT Code 501P : 20, CH: 2(P), Cr : 2 HMAT Code 502 : 80, CH: 4(L), Cr : 4 HMAT Code 502P : 20, CH: 2(P), Cr : 2 HMAT Code 503 : 80, CH: 4(L), Cr : 4 HMAT Code 503P : 20, CH: 2(P), Cr : 2</b>							
<b>VI</b>	<b>HMAT Code 601 : 80, CH: 4(L), Cr : 4 HMAT Code 601P : 20, CH: 2(P), Cr : 2 HMAT Code 602 : 80, CH: 4(L), Cr : 4 HMAT Code 602P : 20, CH: 2(P), Cr : 2 HMAT Code 603D : 50, CH: 2(P), Cr : 2 (Dissertation/Project)</b>							
<b>VII</b>	<b>HMAT Code 701 : 80, CH: 4(L), Cr : 4 HMAT Code 701P : 20, CH: 2(P), Cr : 2 HMAT Code 702 : 80, CH: 4(L), Cr : 4 HMAT Code 702P : 20, CH: 2(P), Cr : 2</b>							
<b>VII I</b>	<b>HMAT Code 801 : 80, CH: 4(L), Cr : 4 HMAT Code 801P : 20, CH: 2(P), Cr : 2 HMAT Code 802 : 80, CH: 4(L), Cr : 4 HMAT Code 802P : 20, CH: 2(P), Cr : 2</b>							
	<b>CH : 92 Marks : 1550 (15*100 = 1500+50 Marks for Project) Credits = 92</b>							
	<b>CH : 160 ; B.Sc Marks : 2850 ( 1550+400+400+400+100) ; B.Sc Credits : 160(92+24+24+16+4)</b>							

Sem : I

MATHEMATICS

HMAT: 101

TOTAL: 100(80(L) +20(T) MARKS

### Elementary Algebra & Theory of Equations & Inequalities

Contact Hour: 4

Credits: 4 + 2 = 6

#### Elementary Algebra

**Unit 1** : Polar representation of complex numbers,  $n^{\text{th}}$  roots of Unity, De Moiré's theorem, Binomial Theorem for complex quantities, Expansions of  $\sin^n\theta$ ,  $\cos^n\theta$  and  $\tan^n\theta$ , Expansions of  $\sin\alpha$  and  $\cos\alpha$  in a series of ascending powers of  $\alpha$ , Sines and Cosines of small angles, Approximation to the root of an equation, Evaluation of indeterminate quantities, Expansions of  $\cos^n\theta$  and  $\sin^n\theta$  in cosines or sines of multiples of  $\theta$ , Expansions of  $\sin n\theta$  and  $\cos n\theta$  in series of descending and ascending powers of  $\sin\theta$  and  $\cos\theta$ .

#### Theory of Equations

**Unit 2** : Polynomials, Division of polynomials, Synthetic divisions, Remainder Theorems and its applications, Equations and Fundamental Theorems, Nature of the roots of an equation, General Properties of Equations, Rolle's theorem, Descartes' rule of signs.

**Unit 3** : Removal of a term from an equation, Equation of squared differences of a cube, Nature of the roots of a cubic equation, Cardan's solution of a cubic equation, Euler's solution of a biquadratic, Descartes' method, Ferraris' method.

#### Inequalities

**Unit 4** : Definitions and elementary properties, Theorem on AM, GM AND HM, Extreme values of sum and product, Theorem of weighted means, Weierstrass Inequalities, Cauchy's Inequalities,  $m^{\text{th}}$  power theorem, Generalized  $m^{\text{th}}$  power theorem.

#### Reference books:

S.K. Mapa, Higher Algebra (Classical), Sarat Book Distributors.

Chandrika Prasad, Theory of Algebra, (Pothisala)

J.G. Chakravorty and P.R. Ghosh, Advanced Higher Algebra

R.M. Khan, Algebra.

#### Practical

1. Plotting the graphs of polynomials of degree 4, 5 and above and checking of above mentioned Theories.

**HMAT Code: 201**

**TOTAL: 100(80(L)+20(P) ) MARKS**

**Solid Geometry & Differential Equation-1**

**Contact Hour: 4**

**Credits: 4 +2 =6**

**Solid Geometry**

**Unit 1:** Introduction to three dimensional geometry, Cartesian plane, Co-ordinate planes and straight lines. Sphere: Plane section of a sphere, intersection of two spheres, sphere with a given diameter, Equation of a sphere through a given circle.

**Unit 2:** Cones and Cylinders: Definition, Equation of a cone with a conic as guiding curve, the right circular cone, its definition and equation. Definition and equation of cylinder, Definition and equation of right circular cylinder. Conicoid: General equation of conicoid, shapes of some surfaces.

**Differential Equation-1**

**Unit 3 :** Basic concepts of Differential equations (Origin and classification of differential equations, Solution of a differential equation , Initial and boundary value problem, existence and uniqueness of Solutions), First of order and first degree Ordinary differential Equations (variables separable, homogeneous, exact, non-exact, linear and reducible to linear). Applications of first order differential equations (Growth, Decay and Chemical Reactions, Heat flow, Oxygen debt, Economics ). Equations of first order but of higher degree.

**Unit 4 :** Second order linear equations with constant coefficients ( Homogeneous and Non Homogeneous ), solution by method of undetermined coefficient and by method of variation of parameters. Equations reducible to linear equations with constant coefficients. Euler-Cauchy differential equation, Linear differential equation with variable coefficient.

**Reference books:**

Shanti Narayan and P. K. Mittal, Analytical Solid geometry, S. Chand and Co.

M. D. Raisinghania, Ordinary and Partial differential equation, S. Chand & Co Ltd., Revised Edition 2014

Smith, Solid Analytic Geometry.

J. Sinha Roy and S. Padhy, A Course of Ordinary and Partial Differential Equations, Kalyani Publishers, New Delhi.

Robert 3. T. Bell Co-ordinate Geometry of Three Dimensions.

Arup Mukherjee and Naba Kumar Bej, Analytical Geometry of 2 and 3 Dimensions.

Schaum's Outline of Calculus, 6th Edition.

Calculus & Analytic Geometry by Thomas, Dorling Kindersley Pvt. Ltd.

**Practical**

## **SEC 1 : DISCRETE MATHEMATICS**

**Unit 1 :** Proportional equivalence, predicates and quantifiers, Nested quantifiers, methods of proof. Relations and their properties, n-array relations and their applications, Boolean functions and their representation.

**Unit 2 :** The basic counting, The Pigeon-hole principle, Generalized permutations and Combinations.

### ***Reference books:***

K. H. Rosen, Discrete Mathematics and its Applications(5<sup>th</sup> edition, TMH).

## **SEC 2 : PRACTICAL**

1. Truth table of distinguish relations.
2. Representation of Boolean function and n-array relations.
3. Generalized permutations and combinations with counter examples.
4. Graph and its representations.

## HMAT Code 301

Total : 100( 80(L)+20(P) ) MARKS

### Elementary Algebra & Calculus

Contact Hour : 4

Credits : 4+2=6

#### Elementary Algebra

**Unit-1** : Systems of linear equations, row reduction and echelon forms, vector equations, the matrix equation  $Ax=b$ , solution sets of linear systems, applications of linear systems, linear independence. Matrices of real and complex numbers : Algebra of matrices. Symmetric and skew-symmetric matrices, Hermitian and skew-Hermitian matrices, Orthogonal matrices. Elementary operations on matrices. Echelon matrix. Rank of a matrix. Determination of rank of a matrix (relevant results are to be stated only).

#### Calculus

**Unit-2** : Higher order derivatives, L-Hospitals, Leibnitz rule and its applications to problems of the type  $e^{(ax+b)}\sin x, e^{(ax+b)}\cos x, (ax+b)^n \sin x, (ax+b)^n \cos x$ , Concavity and inflection points, asymptotes curve tracing in Cartesian coordinates, tracing in polar coordinates of standard curves, L-Hospitals rule.

**Unit-3** : Reduction Formulae, derivations and illustrations of reduction formulae of the type

$\int \sin^n x dx, \int \cos^n x dx, \int \tan^n x dx, \int \sec^n x dx, \int \sin^n x \cos^n x dx$ , Rectification length of plane curves, Beta and Gamma functions.

#### **Reference books:**

S.L. Loney, Trigonometry Part-II, Macmillan and Co., London. Chapter [II, III, IV]

S.K. Mapa, Higher Algebra (Classical), Sarat Book Distributors.

PK. Mittal & Shanti Narayan , Differential Calculus , S. Chand and Co. Chapters [5(5.1, 5.2,5.3, 5.4, 5.5), 13(13.1, 13.2), 15, 17]

P.K. Mittal & Shanti Narayan, Integral Calculus, S.Chand and Co. Chapters[2(2.8), 4(4.1 to 4.6), 9, 10]

S. Ponnusamy, Foundations of complex analysis.

Burnside and Panton, The Theory of Equations (Vol. I).

Chandrika Prasad, Theory of Algebra, (Pothisala).

Thomas Calculus & Analytic Geometry, Dorling Kindersley Pvt. Ltd.

Anton B.Davis, Calculus, Wiley Publication house.

Schaum's Outline of Calculus, 6th Edition.

Robert A. Wredge and Murray Spiegel, Advanced Calculus.

## Practical

1. Plotting the graph of  $e^{(ax+b)}\sin x, e^{(ax+b)}\cos x, (ax+b)^n\sin x, (ax+b)^n\cos x$  and illustrate the effect of a and b.
2. Matrix operation( Addition, Multiplication, inverse and transpose)
3. Applications of L-Hospital Rule in business, Economics and Life Sciences

# MATHEMATICS

## Semester–III

### HMAT Code 302

Total : 100( 80(L)+20(P) ) MARKS

#### Real Analysis-I

Contact Hour : 4

CREDITS : 4+2=6

#### Analysis-I

**Unit1** : Algebra of Real numbers, Order, Upper and Lower bounds, Least upper bound (LUB) and Greatest lower bound (GLB), Order-completeness, Density, Decimal representations of real numbers, Cardinality of sets, Countability, Higher order cardinals and cardinality of power sets.

**Unit2** : Analytical properties of  $\mathbb{R}$ , Open sets, Closed sets, Limit points(Accumulation points), Closure, interior and boundary of sets, Compactness,Bolzano-Weierstrass theorem, Cantor's theorem, Heine-Borel Theorem.

**Unit3** : Sequences, Convergence of sequences, Subsequences and Bolzano-Weierstrass theorem for sequences, monotonic sequence, Weierstrass completeness principle, Cauchy's general principle of convergence, Limit Superior and Limit Inferior.

**Unit4** : Infinite series: Convergence series, Series of positive terms, Tests for convergence of series (comparison test, condensation test, Cauchy's root test, D'Alembert's ratio test), Absolute convergence, Rearrangement of terms of a series, Conditionally convergent series, Power series.

#### Reference Books :

G. Das and S. Pattanayak, Fundamentals of Mathematical Analysis, TMH Publishing Co.

[Chapters:2(2.1,2.2,2.3,2.4,2.6,2.7),3(3.2,3.3,3.4,3.5),4(4.2,4.3,4.4, 4.5,4.6,4.7,4.8,4.10,4.11,4.12,4.13,4.14), 5(5.1,5.2,5.3,5.4,5.5)]

R.G. Bartle and D. R. Sherbert, Introduction to Real Analysis, 3rd Ed., John Wiley and Sons(Asia) Pvt. Ltd., Singapore, 2002.

Gerald G. Bilodeau , Paul R. Thie, G.E. Keough, An Introduction to Analysis, 2nd Ed., Jones & Bartlett, 2010.

Brian S. Thomson, Andrew. M. Bruckner and Judith B. Bruckner, Elementary Real Analysis, Prentice Hall, 2001.

S.L. Gupta and Nisha Rani-Real Analysis, Vikas Publishing House Pvt. Ltd., New Delhi.



S.C. Mallik and S. Arora-Mathematical Analysis, New Age International Publications. [Chapters : 1 (1 to 5), 2 (1 to 4)]

Dipak Chatterjee, Real Analysis.

A. N. Kolmogorov and S. V. Fomin, Introduction to Real Analysis.

### **Practical**

1. Computations of upper and lower bounds, LUB, GLB of sets
2. Computation of values of  $e$ ,  $\pi$
3. Computing limit superior and inferior of a given sequence.

**TOTAL : 100( 80(L)+20(P) ) MARKS**

**REAL ANALYSIS-II**

**Contact Hour : 4**

**Credits : 4+2=6**

**Unit 1 :** Limits of functions ( $\epsilon$ - $\delta$  approach), Left and right limit, Continuity, Sequential criterion for continuity, Algebra of continuous functions and theorems related to continuity of functions, Discontinuity, kinds of discontinuity, Uniform continuity.

**Unit 2 :** Differentiability, Left and right derivative, Algebra of differentiable functions, Caratheodory's theorem(without proof).

**Unit 3 :** Rolle's theorem, Generalized mean value theorem, Lagrange's Mean Value Theorem and Applications, Darboux's theorem, Indeterminate forms, Higher order derivatives, Taylor's theorem.

**Unit 4 :** Maxima and Minima, Taylor's theorem with different forms of remainder, Maclaurin's Theorem, Deduction of Taylor's theorem from Mean Value Theorem, Taylor's and Maclaurin's infinite series, Taylor's series and Maclaurin's series expansions of exponential and trigonometric functions,  $\ln(1+x)$ ,  $1/(ax+b)$  and  $(1+x)^n$

**Practical**

1. Computing for given for given functions, for example, polynomials of 1<sup>st</sup> degree, 2<sup>nd</sup> degree, 3<sup>rd</sup> degree and so on.
2. Problems related to Mean Value Theorem.

**Reference books:**

- S.C. Mallik and S. Arora-Mathematical Analysis, New Age International Publications.  
R. Bartle and D.R. Sherbert, Introduction to Real Analysis, John Wiley and Sons, 2003.  
K.A. Ross, Elementary Analysis: The Theory of Calculus, Springer, 2004.  
A. Mattuck, introduction to Analysis, Prentice Hall, 1999.  
S. L.Gupta and Nisha Rani, Fundamentals of Real Analysis.  
Richard LGoldberg, Methods of Real Analysis.  
S.R. Ghorpade and B.v. Limaye, A Course in Calculus and Real Analysis, Springer, 2006.

**MATHEMATICS, Semester: IV**

**HMAT Code: 402**

**TOTAL: 100(80 (L)+20(P) ) MARKS**

**(Opt. any one)**

**Choice-1: Number Theory**

**Contact Hour: 4**

**Credits: 4+2=6**

**Unit 1:** Divisibility, Primes and their distribution, the binomial theorem.

**Unit 2:** Congruences. Definition and properties, Euler's phi function, Fermat's Theorem, Euler's Theorem, Wilson's Theorem, Solutions of Congruences, The Chinese Remainder Theorem.

**Unit 3 :** Quadratic reciprocity and quadratic forms-Quadratic residues, quadratic reciprocity, The Jacobi symbol, The Fermat conjecture-The famous Last Theorem.

**Unit 4:** Some functions of number theory-Greatest integer function, Arithmetic functions, The Mobius inversion formula, Recurrence functions, Some Diophantine equations.

***Reference books:***

Niven Ivan, Number Theory

David M. Burton, Elementary Number Theory

Neville Robinns, Beginning to Number Theory.

Gareth A Jones and J. Mary Jones, Elementary Number Theory.

**Practical**

1. Application of divisibility and prime numbers.
2. Application of Euler's phi function, Fermat's, Euler's, Wilson's and The Chinese Remainder Theorem.
3. Quadratic reciprocity.
4. Application of Greatest integer function, Arithmetic functions

**Choice-2: Mathematical Modeling**

**Contact Hour: 4**

**Credits: 4+2=6**

**Unit 1:** Simple Situations Requiring Mathematical Modeling. The Technique of Mathematical Modeling, Mathematical Modeling through differential equations. Linear growth and decay Models, Non-linear growth and decay models, compartment models, mathematical modeling of geometrical problems through ordinary differential equations of first order

**Unit 2 :** Mathematical modeling in population dynamics, mathematical modeling of epidemics through systems of ordinary differential equations of first order, compartment models through systems of ordinary differential equations, Mathematical modeling in economics through systems of ordinary differential equations of first order. Mathematical models in Medicine, Arms Race, Battles and International Trade in terms of system of ordinary differential equations

**Unit 3 :** Mathematical modeling of Planetary Motions, Mathematical modeling of circular motion and motion of satellites. Mathematical modeling through linear differential equations of second order.

**Unit 4 :** Situations that can be modeled through graphs. Mathematical models in terms of directed graphs, Optimization principles and techniques. Mathematical modeling through calculus of variations.

**Reference books:**

Mathematical Modeling-J.N. Kapur

**Practical**

1. Development of the model for the Linear and Non-linear growth and decay models.
2. Development of the model for the population dynamics and epidemics.
3. Development of the model for the Planetary and Circular Motions.
4. Mathematical modeling of variational problems and graph.

### **Choice-3 : Classical Geometry**

**Contact Hour : 4**

**Credits : 4+2=6**

**Unit 1 :** Euclid's Geometry: Introduction, Ruler and compass constructions, Euclid's Axiomatic Method, Construction of the regular pentagon.

**Unit 2 :** Hilbert's axioms for geometry: Axioms of Incidence, Betweenness, Congruence for line segments, Congruence for angles, Hilbert Planes, Intersections of lines and circles, Euclidean planes.

**Unit 3 :** Geometry over fields: The real Cartesian plane, Abstract fields and incidence, Ordered fields and betweenness, Congruences of segments and angles, Rigid motions and SAS

**Unit 4 :** Segment Arithmetic: Addition and multiplication of line segments, Similar triangles, Introduction to coordinates

**Reference books:**

R. Hartshorne, Geometry, Euclid and Beyond, Springer, UTM.

R. J. T Bell, Coordinate Geometry of Three Dimensions, Macmillan and Co.

### **Practical**

1. Ruler and compass constructions.
2. Congruence for line segments and angles.
3. Ordered fields, Rigid motions and SAS.
4. Hands on Addition and multiplication of line segments

## **Four-Year Integrated B.Sc. B.Ed Course**

**Physics Elective Paper Syllabus:**

SEMESTER	Course Code	Course Name	Contact hours	Credits	Marks			
					Internal	External	Total	
1 <sup>st</sup> Semester	PHY 101	Physics	4(L)	4	16	64	80	100
	PHY 101P	Physics Practical	2(P)	2		20	20	
2 <sup>nd</sup> Semester	PHY 201	Physics	4(L)	4	16	64	80	100
	PHY 201P	Physics Practical	2(P)	2		20	20	
3 <sup>rd</sup> Semester	PHY 301	Physics	4(L)	4	16	64	80	100
	PHY 301P	Physics Practical	2(P)	2		20	20	
4 <sup>th</sup> Semester	PHY 401	Physics	4(L)	4	16	64	80	100
	PHY 401P	Physics Practical	2(P)	2		20	20	

**Four-Year Integrated B.Sc. B.Ed Syllabus  
1<sup>st</sup> Semester**

**PHY - 101: Physics (Elective)**

**Total credits: 4**

**Full Marks: 80 (64+16)**

**Unit-I: Vectors, Mechanics**

Vectors: Differentiation of vectors, Gradient, Divergence and curl-their meanings and applications. Vector integrations-line, surface and volume integrations, Gauss's divergence theorem, Green's theorem and Stoke's theorem (Only their statements), their application to simple problems.

Moment of inertia. Radius of gravitation, Parallel and perpendicular axes theorems (in two dimension), calculation of moments of inertia for uniform rod, uniform lamina, sphere, cylinder. Velocity and acceleration in Cartesian and plane polar co-ordinate system.

Degrees of freedom, generalized co-ordinates, Lagrange's and Hamilton's equations (only their statements), applications in simple pendulum, simple harmonic oscillator, and projectile, cyclic coordinate and its importance.

**Unit-II: Gravitation and elasticity and fluid**

Gravitational potential and intensity for spherical shell. Hollow and solid sphere, Kater's pendulum with Bessel's correction.

Elastic contents, modulli and their interrelations, bending moment, depression at the free end of a light cantilever, depression of a beam supported at the two ends and loaded at the middle, torsion of a cylinder and torsional constant, torsional oscillations, strain energy of torsion.

Surface tension surface energy molecular theory of surface tension, Explanation of elevation and depression of a liquid in a capillary tube with calculation of rise. Jurin's law.

Viscosity and Newton's law, Poiseuille's equation for the flow of an incompressible fluid( Correction only qualitative),Statement of stoke's law terminal velocity.

**Unit-III: Thermodynamics and Radiation**

Andrew's and Amagat,s experiment, Van der Waal's equation(simple derivation), merits and demerits of van der Waal's equation, critical constants, expression for Boyle temperature.

Second law of thermodynamics. Reversible and irreversible changes, Carnot's cycle and its efficiency. Carnot's theorem, thermodynamics scale of temperature.

Its properties and physical significance, change of entropy in reversible and irreversible changes, porus plug experiment joule-Thomson effect and inversion temperature. Kirchoff's law and its simple derivation, pressure and energy density of diffused radiation (Expression only) .

**Unit-IV Optics**

Fermat's principles reflection and refraction at plane surfaces by Fermat's principle, Refraction at spherical surface, thin lenses and their combination, cardinal points, equivalent lens, Ramsden and Huygen's eyepiece.

Wave nature of light. Huygen's principle, Explanation of reflection, refraction and experiment. Fresnel's biprism experiment, Newton's ring experiment with theory.

Diffraction (Fresnel class): half period zone, explanation of rectilinear propagation of light, principle of zone plate and its behavior as convergent lens.

Diffraction (Fraunhoffer class): diffraction pattern of single slit, double slit and plane transmission grating (simple treatment), circular aperture (qualitative). Polarisation: Double refraction, Huygen's construction for uniaxial crystal.

**Total credits: 2**

**Full Marks: 20**

**CH : 02(P) (one practical means continuous two periods)**

### **Name of the experiments**

1. Determination of modulus of rigidity by statical method or by dynamical method.
2. To determine frequency of tuning fork by Medley's experiment .
3. To determine the refractive index of the given liquid with the help of travelling microscope.
4. To determine the refractive index of the given liquid with the help of a plane mirror and a convex lens( radius of curvature is to be determine with the help of spherometer.
5. To determine the focal length of a concave lens by the combination of concave and convex lens using optical bench.

### **Note:**

Experiments =15 marks

Practical Note Book +Viva-Voce = 05

**Four-Year Integrated B.Sc. B.Ed Syllabus  
2<sup>nd</sup> Semester**

**PHY - 201: Physics (Elective)**



**Total credits: 4**  
**CH: 4 (L)**

**Full Marks: 80 (64+16)**  
**Internal: 16; External: 64**

**Unit 1 : Acoustic :**

Composition of SHMs. Lissajoe's Figure, Damped and forced vibrations (Solutions are to assumed without derivations), resonance and sharpness of resonance.

**Unit-II**

Differential equation of reverberation wave using pressure distribution, stationary waves in strings with various modes, characteristics features of plucked and struck strings, young's law.

Acoustics of building: Reverberation, Sabine's law, live and dead rooms.

**Unit III : Electrostatics, Magnetostatics, Megnetic effect of current :**

Coulomb;s theorem, mechanical force on a charges surface, energy density, capacitance of spherical and cylindrical capacitors.

Use of biot-savrt law for the calculation of magnetic induction due to circular coil and solenoid (finite and infinite )

Magnetic shell and potential due to magnetic shell, equivalence of magnetic shell and current carrying loop.

**Unit-IV**

Hysteresis and calculation of hysteresis loss, selection of material for core of electromagnet.

Theory of Ballistic galvanometer with damping correction.

**Total credits: 02**

**Full Marks: 20**

**CH : 02(P) (one practical means continuous two periods)**

### **Name of the experiments**

1. Determination of 'g' by Kater's pendulum.
2. Viscosity of water by Poiseuille's method ( diameter of the tube to be measured by microscope )
3. Determination of H and M by deflection magnetometer and vibration magnetometer.
4. Determination of the end- correction of meter- bridge wire to find the specific resistance of the material of the given wire.
5. Determination of resistance per unit length of the meter bridge wire by Cary Foster's method and determination of unknown resistance.

### **Note:**

Experiments =15 marks

Practical Note Book +Viva-Voce = 05

**Four-Year Integrated B.Sc. B.Ed Syllabus  
3<sup>rd</sup> Semester**

**PHY - 301: Physics (Elective)**

**Total credits: 4**  
**CH: 4(L)**

**Full Marks: 80 (64+16)**  
**Internal: 16; External: 64**

### **Unit I : Current Electricity I**

Thermoelectricity : Seebeck, Peltier and Thomson's effect, Peltier and Thomson's coefficient, laws of thermoelectricity, total e.m.f. developed in a thermocouple, thermoelectric curve and concept of neutral temperature and temperature of inversion, thermoelectric power, thermoelectric diagram and its application, calculation of Peltier and Thomson coefficient from thermodynamic considerations.

### **Unit-II**

Electromagnetic induction : Self inductance of circular coil and solenoid, mutual inductance due between two coaxial circular coils, mutual inductance between a small coil a solenoid on which the small coil is wound coaxially.

Growth and decay of current in LR circuit, charging and discharging of capacitor through a resistance (CR Circuit), Transient current in LCR circuit (qualitative considerations of different cases without , mathematical analyses).

### **Unit III : Current Electricity II and Atomic theory**

Current Electricity II Alternating emf and alternating current : General expressions, their mean and rms values, mean power and power factor, wattless current, R,L,C,LR,CR and LCR circuit under AC voltage (Solution by any method), Reactance and impedance, Resonance in LCR circuit, rejector circuit, choke coil, principle of ideal, transformer, various losses in real transformer.

### **Unit IV**

Atomic theory: Positive rays, analysis by parabola method, limitation of Bohr's theory, Extension of Bohr's model as Vector atom model, quantum numbers, normal Zeeman effect, statement of Pauli's exclusion principle.

X- ray : Bragg's law and explanation, Crystalline and amorphous solids, elementary of crystal study : NaCl and KCl structure, Compton effect and calculation of Compton shift.

**Four-Year Integrated B.Sc. B.Ed Syllabus**  
**3<sup>rd</sup> Semester**

**PHY – 301P: Physics Practical (Elective)**

**Total credits: 02**

**Full Marks: 20**

**CH : 02(P) (one practical means continuous two periods)**

**Name of the Experiments,**

1. Comparison of the values of two resistance by their fall of potential method with the help of Carey Foster's bridge.
2. Determination of the reduction factor of a tangent galvanometer with the help of copper voltameter and hence find the value of H.
3. To determine temperature coefficient of resistance of material of given wire by meter bridge.
4. To determine the resistance of a suspended coil galvanometer by half- deflection method and hence to find its figure of merit.
5. To determine the current flowing in a circuit by using a potentiometer(r should be supplied )
6. To determine the refractive index of material of prism by using spectrometer.

**Note:**

Experiments =15 marks

Practical Note Book +Viva-Voce = 05

**Four-Year Integrated B.Sc. B.Ed Syllabus  
4<sup>th</sup> Semester**

**PHY - 401: Physics (Elective)**

**Total credits: 4**  
**CH: 4 (L)**

**Full Marks: 80 (64+16)**  
**Internal: 16; External: 64**

### **Unit I : Electronics**

Diode Rectifier : calculation of average current and voltage, r.m.s current and voltage, ripple factor and efficiency of half wave and full wave rectifier, removal of ripple : T and  $\pi$  filters. Zener break down, zener voltage, zener diode, and its use as a voltage regulator.

Transistor characteristics in CE mode, load line analysis, Q-point, Working of CE transistor amplifier and calculation of voltage gain (preliminary method )

### **Unit-II**

Field effect transistor (FET ) and its differences from bipolar transistor, n and p channel FET, FET operation, static and dynamic characteristics , FET parameters and their relation, use of FET as a voltage amplifier.

Operation amplifier (ideal), concept of virtual ground, basic equation of an ideal OP- AMP , use of OP AMP as inverter, phase shifter, adder, different and integrator.

Network theorems: Thevenin, Norton, Superposition and Maximum power transfer.

### **Unit III**

#### **Relativity and Nuclear Physics :**

Gallilean invariance, inertial and non-inertial frames, pseudo force, apparent weight in accelerated frame. Concept of space, time and mass according to Newtonian mechanics. Michelson- Morley experiment- its difficulties. Postulates of special theory of relativity, simple derivation of Lorentz transformation formula, length contraction, time dilation, addition of velocities ( velocity along the same line), variation of mass with velocity (deduction on the basis of head- on –collision), equivalence of mass and energy.

### **Unit-IV**

Radio activity : Radioactive disintegration : secular and transient equilibrium,

$\alpha$  – rays : range of alpha particles, Geiger Nuttal rule.

B – rays : spectrum and its natures, neutrino hypothesis (qualitative idea only), internal conversion.

$\gamma$  – rays , qualitative discussion on  $\gamma$  – rays absorption in matter electron- positron annihilation (qualitative).

Cosmic ray, primary and secondary cosmic ray, muons, Van Allen Belt.

Properties of nuclei : nuclear mass, charge, size, packing fraction, atomic mass unit, isobars, isotopes, isotones, binding energy, binding energy curve and its significance.

Nuclear reaction : Nuclear reaction, conservation principles in nuclear reactions, Q – value and threshold, endoergic and exoergic reactions, artificial radioactivity.

**Total credits: 02**

**Full Marks: 20**

**CH : 02(P) (one practical means continuous two periods)**

**Name of the Experiment**

1. To draw the characteristic curves of PN – junction diode for both forward and reverse bias and hence to determine the AC and DC resistance of the diode.
2. To draw static characteristic curves (only mutual characteristics) of triode and to find  $\mu$ ,  $r_p$  and  $g_m$
3. Study of the characteristic response curve of a photodiode cell (or determination of plank's constant ).
4. Zener diode reverse characteristics, reverse impedance and break down voltage.
5. Input characteristic of common emitter (CE) transistor.
6. Output characteristic of common emitter (CE) transistor.
7. Drawing characteristics of FET & to determine FET parameters.
8. To construct 2- input OR & AND gates using diodes and to verify the truth table.

**Note:**

Experiments =15 marks

Practical Note Book +Viva-Voce = 05

## Four-Year Integrated B.Sc. B.Ed Course

### Chemistry Elective Paper Syllabus:

SEMESTER	Course Code	Course Name	Contact hours	Credits	Marks			
					Internal	External	Total	
1 <sup>st</sup> Semester	CHE 101	Chemistry	4(L)	4	16	64	80	100
	CHE 101P	Chemistry Practical	2(P)	2		20	20	
2 <sup>nd</sup> Semester	CHE 201	Chemistry	4(L)	4	16	64	80	100
	CHE 201P	Chemistry Practical	2(P)	2		20	20	
3 <sup>rd</sup> Semester	CHE 301	Chemistry	4(L)	4	16	64	80	100
	CHE 301P	Chemistry Practical	2(P)	2		20	20	
4 <sup>th</sup> Semester	CHE 401	Chemistry	4(L)	4	16	64	80	100
	CHE 401P	Chemistry Practical	2(P)	2		20	20	

**Unit-I: General Chemistry - Structure of atom:**

Atomic spectra of hydrogen atom, Bohr's atomic model, Sommerfield model, Plank's Equation, Photoelectric effect, Wave-particle duality, de-Broglie matter wave, Heisenberg's uncertainty principle, Schrodinger's wave equation for one electron system (no mathematical derivation), wavefunctions, physical concept of  $\psi$  and  $\psi^2$ , quantum numbers, s, p and d orbitals, shapes of s, p and d orbitals; Pauli's exclusion principle, Hund's rule, Aufbau principle, electronic configurations of atoms (up to  $Z = 30$ ).

**Unit-II: General Chemistry - Periodic properties of elements and Redox Reactions:**

Classification of elements on the basis of electronic configuration, Periodic properties, periodicity of elements, atomic radii, ionic radii, ionization energy, electron affinity, electronegativity, oxidation states, shielding effect, effective nuclear charge, Slater's rule, diagonal relationship. Ion-electron method for balancing chemical equations, equivalent weights of oxidants and reductants, standard electrode potential, electrochemical series; redox potentials and its applications

**Unit-III: Organic Chemistry**

A. Structure and Reactivity of Organic Molecules:

Hybridization ( $sp^n$ ,  $n = 1, 2, 3$ ) of organic compounds, bond lengths, bond angles, bond energy, bond polarity, bond polarizability, formation of  $\sigma$  and  $\pi$  bonds, localized and delocalized chemical bonds, resonance, tautomerism, steric inhibition of resonance, hyperconjugation, inductive and field effects, H-bonding, dipole moment- bond moment and group moment;

B. Organic reaction mechanism in aliphatic compounds:

Synthesis of alkanes, alkenes, alkynes, alcohols, ethers, aldehydes, ketones, carboxylic acids and their derivatives; Study of (a) Electrophilic and free radical addition at  $C=C$ , (b) Nucleophilic addition at the  $C=O$  group of aldehydes and ketones; (c) Nucleophilic substitution reactions -  $S_N^1$ ,  $S_N^2$ , (d) Elimination reactions, (e) ozonolysis, hydroboration-oxidation, catalytic hydrogenation of alkenes, use of Lindlar's catalyst, Birch reduction, hydration and dihydroxylation of alkenes and oxidation of alkenes and ketones.

**Unit-IV Physical Chemistry**

A. The Gaseous states: Gas laws, postulates of kinetic theory of gases, gas pressure, kinetic theory of gas equation  $PV = \frac{1}{3} mnc^2$ , deduction of gas laws, average kinetic energy of molecules, mean free path, collision diameter, collision number, collision frequency, their dependence on temperature and pressure, heat capacity of gases, viscosity of gases.

B. Real gases: Deviation from ideal behaviour, Regault, Andrews and Amagat experiments, causes of such deviations, compressibility factor, vander Waals equation, critical phenomenon, critical constants, law of corresponding states; Maxwell distribution law of molecular velocities (no derivation), most probable, average and root mean square velocities- their inter relationship;

C. Thermodynamics: First law of thermodynamics- mathematical relation, internal energy, Joule's experiment, heat capacity of gases at constant volume and constant pressure, relationship between  $C_p$  and  $C_v$ , Kirchhoff's equation, calculation of change in thermodynamic parameters for expansion/compression of an ideal gas under various conditions for reversible/irreversible processes, Jule-Thomson experiment, inversion temperature (elementary ideas).

**RECOMMENDED BOOKS**

1. *Concise Inorganic Chemistry*, J.D. Lee. 5<sup>th</sup> Edn. (Chapman and Hall, 2002)
1. Fundamental concept of inorganic chemistry, Vol-1, -A.K. Das
2. Selected topics in Inorganic Chemistry- Malick, Tuli, Madan
3. *Organic Chemistry (Vol. 1)*, I. L. Finar, 6<sup>th</sup> Edition, (Pearson Education, 2002)



4. Organic reaction mechanism- P.S. Kalsi
5. Atkins Physical Chemistry, P. Atkins and J. de. Paula, 10<sup>th</sup>Edn., (Oxford University, press 2014).
6. Physical Chemistry- S. Glasstone
7. Physical chemistry- G.W. Castellan.
8. Advanced Organic Chemistry - B.S. Bahl and A. Bahl, (S. Chand).
9. Organic Chemistry - R.T. Morison and R.N. Boyed, (Prentice – Hall).

**CH : 02(P) (one practical means continuous two periods)**

**Inorganic Practical:**

**Inorganic qualitative analysis:**

Qualitative analysis of inorganic salt mixtures containing not more than **four** radicals

$\text{Ag}^+$ ,  $\text{Pb}^{2+}$ ,  $\text{Cu}^{2+}$ ,  $\text{Cd}^{2+}$ ,  $\text{Sn}^{2+}$ ,  $\text{Fe}^{3+}$ ,  $\text{Al}^{3+}$ ,  $\text{Cr}^{3+}$ ,  $\text{Mn}^{2+}$ ,  $\text{Co}^{2+}$ ,  $\text{Zn}^{2+}$ ,  $\text{Ni}^{2+}$ ,  $\text{Ca}^{2+}$ ,  $\text{Ba}^{2+}$ ,  $\text{Sr}^{2+}$ ,  $\text{Mg}^{2+}$ ,  $\text{K}^+$ ,  $\text{NH}_4^+$ ;  $\text{Cl}^-$ ,  $\text{Br}^-$ ,  $\text{I}^-$ ,  $\text{SO}_4^{2-}$ ,  $\text{PO}_4^{3-}$ ,  $\text{BO}_3^{2-}$ ,  $\text{NO}_3^-$ ,  $\text{CrO}_4^{2-}$

**Note:**

Experiment for 3 radicals = 15

Practical Note Book +Viva-Voce =05

**Recommended Books:**

1. A Manual of Practical Chemistry (Vol. I & II) - R.C. Bhattacharjee
2. University hand book of undergraduate chemistry experiments – G.N. Mukherjee, University of Calcutta.

### Unit-I: General Chemistry -Acids and bases

Arrhenius, Bronsted-Lowry concept, solvent system concept (Franklin); Lewis concepts of acids and bases; Hard and Soft Acids and Bases: Classification of acids and bases as hard and soft; Pearson's SHAB principle, Relative strength of acid & bases (Pka, Pkb concept).

### Unit II: Inorganic Chemistry -Chemical bonding:

Ionic bond - lattice energy, Born-Haber cycle, ionic solids: radius ratio rule and its limitations, ionic potential, polarizing power and polarisability, Fajan's rule.

Covalent bond: Basic concepts of valence bond theory and its limitations, resonance and resonance energy, hybridization involving s, p, d orbitals; sigma and pi-bonds, bond length, bond order, bond energy, formal charge, dipole moment, percentage of ionic character of covalent bond, VSEPR theory and its applications, LCAO-MO theory (qualitative) and its application to homo-nuclear diatomic molecules ( $H_2$ ,  $B_2$ ,  $C_2$ ,  $N_2$ ,  $O_2$ ,  $F_2$ ); hydrogen bond, metallic bond (electron sea model and band theory).

### Unit III: Organic Chemistry

#### A. Stereochemistry of organic compounds:

Types of stereoisomers—configurational and conformational, enantiomers and diastereomers, geometrical isomers and their nomenclatures, optical isomers, R/S and D/L notations of optical isomers, racemic mixture and resolution; Conformational nomenclature; eclipsed, staggered, gauche and anti; Fischer, Newman, sawhorse and Flying-wedge projections; conformational analysis of ethane, n-butane, relative stability of conformers.

**B.Aromatic compounds and their reactions:** Aromaticity, non-aromaticity, antiaromaticity, homoaromaticity (benzenoid and nonbenzenoid); Electrophilic substitution in benzene (general mechanism): alkylation, acylation, halogenations, nitration, sulphonation; Nucleophilic aromatic substitutions.

### Unit-IV: Physical Chemistry

**Chemical kinetics:** Order and molecularity of a reaction, rate and differential rate of reaction, rate laws and equations, differential and integral forms of rate equation (up to second order only), experimental methods for the determination of order of reactions.

**Phase equilibrium:** Phase, component, degree of freedom, phase rule equation  $F = C - P + 2$  (derivation is not required), phase diagram one component systems water, sulphur and carbon dioxide, principle of sublimation, Henry's law for solubility of a gas in liquid, Nernst Distribution law, partition coefficient.

**General features and Properties of dilute solution:** Type of solution, mode of expressing composition of solution- molarity, normality, molality, mole fraction and percentage, Type of properties- extensive, intensive, additive, constitutive and colligative. Raoult's law of relative lowering of vapour pressure, elevation of boiling point, depression of freezing point, osmosis (thermodynamic derivation excluded), laws of osmosis, experimental method of determination, Van't-Hoff factor, determination of molecular weight based on these properties, abnormal solution properties.

### RECOMMENDED BOOKS

1. Atkins Physical Chemistry, P. Atkins and J. de. Paula, 10<sup>th</sup>Edn., (Oxford University, press 2014).
2. Physical Chemistry- S. Glasstone
3. Physical chemistry- G.W. Castellan.
4. March's *Advanced Organic Chemistry*; Reactions, Mechanisms and Structure, J. March and M. B. Smith, 6<sup>th</sup>Edn (Wiley. 2007).

5. *Basic Inorganic Chemistry*- F. A. Cotton and G. Wilkinson
6. *Advanced Organic Chemistry, Reactions and Mechanism* – Mukherjee & Singh
7. *Organic Chemistry* - R.T. Morison and R.N. Boyd, (Prentice – Hall).
8. *Basic Stereochemistry of Organic Molecules* –SubrataSengupta, Book Syndicate
9. *Inorganic Chemistry Vol. I & II* - R.L. Datta

**Organic Chemistry Practical:**

1. Distillation of n-Butanol, cyclohexanone, aniline, acetophenone and nitrobenzene using air or water condenser and determination of their boiling point.
2. Concept of crystallization, purification of following organic compounds by crystallization and determination of their melting point:
  - i) Phthalic acid from hot water (using fluted filter paper and stem less funnel)
  - ii) Acetanilide from boiling water
  - iii) Benzoic acid from hot water
  - iv) Salicylic acid from water
  - v) Aspirin from water
  - vi) Naphthalene from ethanol
3. Detection of special elements (nitrogen, sulphur, halogens) and functional group(s) present in a pure organic solid (phenolic-OH, -COOH, -CHO, >CO, -NH<sub>2</sub>, -NO<sub>2</sub>, -CONH<sub>2</sub>, >C=C<). (Determination of m. p.; solubility test, detection of special elements, detection of functional groups).

**Note:**

Experiment for 3 radicals = 15

Practical Note Book +Viva-Voce =05

**RECOMMENDED BOOKS**

1. Advanced Organic Chemistry - N.K. Visnoi
2. JaibaRasayan–SubrataSengupta, Book Syndicate.
3. A Manual of Practical Chemistry (Vol. I & II) - R.C. Bhattacharjee
4. University hand book of undergraduate chemistry experiments – G.N. Mukherjee, University of Calcutta.
5. College practical chemistry - Ahluwalia, Dingra and Gulati.
6. , Practical Organic Chemistry, F.G. Mann and B. C. Saunders.

**Semester – III**  
**Elective paper**  
**CHE- 301: Chemistry**

**Credits: 04**  
**CH: 04**

**Full Marks: 80 (64+16)**  
**External; 64; Internal: 16**

**Unit I: Nuclear Chemistry**

Fundamental particles of nucleus, Concept of Nuclides, isotopes, isobars and isotones (with specific examples), nuclear forces, qualitative idea of stability of the nucleus (n/p ratio), mass defect, nuclear binding energy, packing fraction, Natural and artificial radioactivity, Radioactive disintegration series, half-life, average life, group displacement law; Nuclear reactions, artificial transmutation, nuclear fusion and fission; Nuclear fusion as a future source of energy, Nuclear reactors; Application of Radioactivity and Radio isotopes as tracers in chemistry, biology, medicine, agriculture and industry.

**Unit-II: Coordination Chemistry**

Werner's theory, types of ligands and their classification, nomenclature (IUPAC), coordination number and stereochemistry (up to coordination number 6); chelates, chelate effect, inner metallic complexes, types of isomerism in coordination compounds, geometrical and optical isomers in 4, 6 coordinated complexes.

Bonding in coordination compounds: Sidgwick EAN rule, Valence Bond Theory (VBT) and its limitations; Elementary treatment of crystal field theory, splitting of d orbitals in square planar, tetrahedral and octahedral complexes

**Unit-III: Organic Chemistry**

**Synthetic applications of active methylene compounds and Grignard reagent:**

Synthesis and synthetic applications of diethyl malonate and ethylacetoacetate; Preparation and synthetic applications of Grignard reagents;

**Carbohydrates:** Introduction, occurrence, classification, nomenclature, inter-relationship amongst monosaccharides, constitution of glucose and fructose, reactions of glucose and fructose, osazone formation, mutarotation and its mechanism, cyclic structures, pyranose and furanose forms (monosaccharide's only).

**Amino acids and Peptides:** Introduction, alpha-amino acids – synthesis, physical and chemical properties, isoelectric points, peptide synthesis and determination of C and N terminal amino acid residues of peptides.

**Unit-IV: Physical Chemistry**

**A. Electrical conduction through solution:** Arrhenius theory of electrolytic dissociation, mode of transport of electricity through solution, transport number of ions, experimental method of determination of transport number – Hittorf's method, abnormal transport number, specific, equivalent and ionic conductances, ionic mobility, absolute velocity of ions, strong and weak electrolytes, Kohlrausch's law and its applications, measurement of conductance of solutions and applications; Solubility of sparingly soluble salts.

**B. Ionic equilibrium:** Ostwald dilution law, ionization of water, pH, buffer solution, buffer capacity, mechanism of buffer action, Henderson equation, hydrolysis of salts, common ion effect, solubility product, application of solubility product principle in analytical chemistry, ionic strength.

**C. Electrochemical cells:** Galvanic cells vis-à-vis electrolytic cells, reversible and irreversible cells, standard cells.

**RECOMMENDED BOOKS**

1. *Concise Inorganic Chemistry*, J.D. Lee. 5<sup>th</sup>Edn .(Chapman and Hall, 2002)
2. Fundamental concept of inorganic chemistry, Vol-1, -A.K. Das
3. Selected topics in Inorganic Chemistry- Malick, Tuli, Madan
4. Inorganic Chemistry, R.L. Dutta, Vol-I and II
5. *Organic Chemistry (Vol. 1)*, I. L.Finar, 6<sup>th</sup> Edition, (Pearson Education,2002)
6. Organic Chemistry, J.Clayden, N.Greeves, S.Warren, and P. Wothers, 2<sup>nd</sup>Edn.,
7. Physical Chemistry- S. Glastone
8. Physical chemistry- G.W. Castellan.
9. *Basic Inorganic Chemistry*- F. A. Cotton and G. Wilkinson
10. Organic Chemistry - R.T. Morison and R.N. Boyd, Prentice – Hall.
11. Inorganic Chemistry Vol. I & II - R.L. Datta
12. Advanced Inorganic Chemistry Vol. I & II - Prakash, Tuli, Basu and Madan, S. Chand
13. Fundamental concepts of Inorganic Chemistry - A.K. Das
14. General and Inorganic Chemistry - R. P. Sarkar,
15. General and inorganic chemistry - S. N. Podder and S.P. Ghosh

**Credits: 02**

**Full Marks: 20**

**CH : 02 (P) (one practical means continuous two periods)**

### **Physical Chemistry Practical**

*List of the experiments which are to be performed by the students (at least three experiments are to be set in the examination and students are to be performed only one experiment):*

1. Determination of the surface tension of a supplied liquid solvent/ solution by drop volume method.
2. Determination of the coefficient of viscosity of a given liquid/solvent using Oswald viscometer.
3. Determination of the partition coefficient of iodine between water and an organic solvent.
4. Determination of pH of a buffer solution by colour matching method.
5. Determination of concentration of HCl/NaOH by Conductometric Titration
6. Determination of concentration of supplied BaCl<sub>2</sub> by standard Na<sub>2</sub>SO<sub>4</sub>/K<sub>2</sub>SO<sub>4</sub> conductometrically.
7. Determination of Order of a Reaction – Hydrolysis of Ester.

#### **Note:**

Experiments = 15 marks

Practical Note Book + Viva-Voce = 05

#### **Recommended books**

1. A Manual of Practical Chemistry (Vol. I & II) - R.C. Bhattacharjee
2. University hand book of undergraduate chemistry experiments – G.N. Mukherjee, University of Calcutta.
3. College practical chemistry - Ahluwalia, Dingra and Gulati.



**Credits: 04**  
**CH: 04**

**Full Marks: 80 (64+16)**  
**External; 64; Internal: 16**

### **Unit-I Inorganic Chemistry:**

Chemistry of s- and p-Block elements: Group discussion of elements with respect to: Position in periodic table, electronic configuration, atomic and ionic radii, ionization energy, electron affinity, electronegativity, oxidation states, oxide, hydroxide.

Oxides and hydroxides of alkali and alkaline earth metals, Boron hydrides, Lithium aluminium hydride, Silicates, Silicones, oxyacids of nitrogen, phosphorous and sulphur;

Chemistry of d-Block Elements-First row Transition Series: (3d) electronic configuration, Relative stability of oxidation states, Reactivities, colour and Magnetic properties.

Preparation, properties and structure in the following compounds: Potassium ferro and ferricyanide, Sodium cobaltinitrite, Nessler's reagent, Sodium nitropurusside, Potassium dichromate and potassium permanganate.

### **Unit-II: Carbonyls and Nitrosyls**

**(A) Metal carbonyls:** Metal carbonyls, methods of preparation, properties, structure and bonding in Metal carbonyls, Effective atomic number (EAN) rule. 18-electron rules applied to metallic carbonyls. Preparation, properties and structure of nickel tetracarbonyl, iron penta carbonyls, chromium hexa carbonyls, dimanganesedeca carbonyl;

**(B) Metalnitrosyls:** Preparation and properties, Metal nitrosyl carbonyls, metal nitrosyl halides, bonding in metal nitrosyls. Effective atomic number (EAN) rules as applied to metallic nitrosyls.

### **Unit III Organic Chemistry: Chemistry of heteroatoms**

**Acyclic compounds:** Preparation of nitroalkanes and nitroarenes. Chemical reactions of nitroalkanes, Mechanisms of nucleophilic substitution in nitroarenes and their reductions in acidic, neutral and alkaline media;

Structure and nomenclature of amines, physical properties; Separation of a mixture of primary, secondary and tertiary amines, Structural features effecting basicity of amines, Preparation of alkyl and aryl amines (reduction of nitro compounds, nitriles), reductive amination of aldehydic and ketonic compounds, Reactions of amines: Electrophilic aromatic substitution in aryl amines, reaction of amines with nitrous acid. Synthetic transformation of aryldiazonium salts, azo coupling;

**Heterocyclic compounds:** Introduction, structure, synthesis and chemical reactivity of furan, pyrrole, thiophene, pyridine and basicity of pyrrole and pyridine; Chemistry of indole and quinoline

### **Unit IV: Physical Chemistry**

**Solid state:** Nature of solid state, laws of crystallography, Weiss and Miller indices, unit cell, crystal systems, Bravais lattice, symmetry elements, types of crystals, crystal forces. X-ray diffraction of crystals, Bragg's law,

#### **Chemical Kinetics and Catalysis**

Chemical kinetics and its scope, rate of a reaction, factors influencing the rate of a reaction – concentration, temperature, pressure, solvent, light catalyst, concentration dependence of rates, mathematical characteristics of simple chemical reactions – zero order, first order, second order, pseudo order, half-life and mean life, Determination of the order of reaction – differential method, method of integration, method of half-life period and isolation method.

Characteristics of catalyzed reactions, classification of catalysis, homogeneous and heterogeneous catalysis, enzyme catalysis, miscellaneous examples

### **RECOMMENDED BOOKS**

1. *Concise Inorganic Chemistry*, J .D. Lee. 5<sup>th</sup>Edn .(Chapman and Hall, 2002)
2. Fundamental concept of inorganic chemistry, Vol-1, -A.K. Das
3. Selected topics in Inorganic Chemistry- Malick, Tuli, Madan
4. Inorganic Chemistry, R.L. Dutta, Vol-I and II
5. Organic Chemistry (Vol. 1), I. L Finar, 6<sup>th</sup> Edition, (Pearson Education, 2002)
6. Physical Chemistry- S. Glasstone
7. Physical chemistry- G.W. Castellan.
8. *Basic Inorganic Chemistry*- F. A. Cotton and G. Wilkinson
9. Advanced Organic Chemistry - B. S. Bahl and A. Bahl, S. Chand
10. Advanced Organic Chemistry, Reactions and Mechanism – Mukherjee and Singh
11. Organic Chemistry - R.T. Morrison and R.N. Boyd, Prentice – Hall.
12. Inorganic Chemistry Vol. I and II - R.L. Datta
13. Advanced Inorganic Chemistry Vol. I and II - Prakash, Tuli, Basu and Madan, S. Chand
14. Fundamental concepts of Inorganic Chemistry - A.K. Das
15. General and Inorganic Chemistry - R. P. Sarkar,
16. General and inorganic chemistry - S.N. Podder and S.P. Ghosh

Credits: 02

Full Marks: 20

CH : 02(P) (one practical means continuous two periods)

Estimation and preparation of organic and inorganic compounds

1. Organic quantitative analysis:
  - i) Estimation of aniline using brominating mixture
  - ii) Estimation of ascorbic acid by iodometric titration
2. Inorganic estimation
  - i) Estimation of Fe (III) by  $\text{KMnO}_4$  and standard  $\text{K}_2\text{Cr}_2\text{O}_7$  solution
  - ii) Iodometric estimation of Cu(II)
3. Preparation of following organic compounds:
  - i) acetanilide
  - ii) aspirin
  - iii) p-bromoacetanilide
  - iv) phthalimide
4. Preparation of following inorganic complexes:
  - i) Potassiumtrioxalatochromate(III),  $\text{K}_3[\text{Cr}(\text{C}_2\text{O}_4)_3]$ ;
  - ii) Tetraamminecopper(II) sulphate  $[\text{Cu}(\text{NH}_3)_4]\text{SO}_4$ ;
  - iii) Bis-dimethylglyoximate Nickel(II)  $[\text{Ni}(\text{DMG})_2]$
  - iv) trisacetylacetonatoiron(III),  $\text{Fe}(\text{acac})_3$

**Note:**

Experiments =15 marks

Practical Note Book +Viva-Voce = 05

#### **RECOMMENDED BOOKS**

1. Advanced Organic Chemistry - N.K. Visnoi
2. JaibaRasayan–SubrataSengupta, Book Syndicate.
3. A Manual of Practical Chemistry (Vol. I and II) - R.C. Bhattacharjee
4. University hand book of undergraduate chemistry experiments – G.N. Mukherjee, University of Calcutta.
5. College practical chemistry - Ahluwalia, Dingra and Gulati.
6. Text Book of Practical Organic Chemistry A. I. Vogel, A. R. Tatchell, B. S. Furnis, A.J. Hannaford and P.W.G. Smith, 5<sup>th</sup>Edn., (Prentice-Hall, 1996).

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**B.A (Economics) Syllabus- 2018 for Four-Year Integrated B.A.B.Ed Course**

**Economics Elective Paper**

SEM.	Course Code	Course Name	Title of the paper	Contact hours	Credits	Marks		
						Internal	External	Total
<b>1<sup>st</sup> Semester</b>	EC 101	Economics	Microeconomic Theory	4(L)+2(T)	6	20	80	100
<b>2<sup>nd</sup> Semester</b>	EC 201	Economics	Macroeconomic Theory	4(L)+2(T)	6	20	80	100
<b>3<sup>rd</sup> Semester</b>	EC 301	Economics	Development Economics	4(L)+2(T)	6	20	80	100
<b>4<sup>th</sup> Semester</b>	EC 401	Economics	Indian Economy	4(L)+2(T)	6	20	80	100

### **Semester – I**

#### **Paper – 1: Microeconomic Theory**

**100 Marks**

- Unit – I: Demand, Supply and Market Equilibrium
- Unit – II: Consumer Choice and Individual Demand
- Unit – III: Production and Cost
- Unit – IV: Market Structure

### **Semester – II**

#### **Paper – 2: Macroeconomic Theory**

100 Marks

- Unit – I: National Income Accounting
- Unit – II: Employment, Consumption and Investment Function
- Unit – III: Money and Banking
- Unit – IV: Inflation and Business Cycle

### **Semester – III**

#### **Paper – 3: Development Economics**

100 Marks

- Unit – I: Measuring Development
- Unit – II: Theories of Growth and Development
- Unit – III: Dual Economy Models
- Unit – IV: Development and Environment

### **Semester – IV**

#### **Paper – 4: Indian Economy**

100 Marks

- Unit – I: Structure and Trends of Indian Economy
- Unit – II: Indian Agriculture, Industry and Service Sectors
- Unit – III: Financial System: Its Components and Operation
- Unit – IV: Indian Economic Policies: Industry, Trade and Finance

## **Four-Year Integrated B.A. B.Ed Course**

1<sup>st</sup> Semester

**ECONOMICS (Elective)**  
**EC 101: Microeconomic Theory**

**Credits- 6**  
**CH: 4 (L)+(T)**

**Max. Marks: 100**  
**External : 80**  
**Internal : 20**

**Course Content**

**Unit –I: Demand, Supply and Market Mechanism**

Concept of demand and supply, Factors affecting demand and supply, Laws of demand and supply, Change in demand and shift in demand curve, Elasticity – Price and Cross, Income elasticity, Interaction of market equilibrium.

**Unit –II: Consumer Choice and Individual Demand**

Concept of utility – Cardinal and Ordinal, Axioms of Consumer Preferences, Indifference curves and consumer equilibrium, Price consumption curve income consumption curve; Substitution effect and Income effect of price change, Ordinary and Compensated Demand Curves.

**Unit III: Production and cost**

Production Function: Total, Average and marginal product. Law of variable proportions and laws of returns to scale; Iso-quant and least cost combination- Expansion path.

Cost: Types of cost – Fixed and Variable. Total, Average and marginal cost and their interrelation; short run and long run cost curves, Envelope theorem; Total average and marginal revenue and their relationship.

**Unit –IV: Market Structure**

Concept of market power and different forms of market: Perfect competition, monopoly (Sources and cost of monopoly); Monopolistic competition (price differentiation), Oligopoly (collusion and cartel)

Market equilibrium under perfect competition: Profit maximization under perfect competition –short run and long run; short run supply curve of the firm and long run supply curve of the industry; constant, increasing and decreasing cost industry.

**Reading List**

1. H. L. Ahuja – Advanced Economy Theory, S. Chand & Company Ltd.
2. Koutsoyiannis – Modern Micro Economics, Macmillan, London
3. Maddala and Miller – Microeconomic Theory, McGraw-Hill International
4. Pindyk and Rubinfeld – Microeconomics, Chapter 18, Prentice Hall
5. Salvatore – Microeconomics
6. Hal R. Varian, Intermediate Microeconomics: A Modern Approach, East-West Press, New Delhi.

## Semester -II

### ECONOMICS (Elective)

#### EC 201: Macroeconomic Theory

Credits- 6

CH: 4 (L)+(T)

Max. Marks: 100

External : 80

Internal : 20

#### **Content:**

##### **Unit – I: Theory of Employment**

Classical Theory of Employment, its criticism and Keynesian Revolution. The Theory of Effective Demand; Determination of Simple Keynesian Equilibrium; The IS-LM Framework and Complete Keynesian Model.

##### **Unit – II: Consumption Function and Investment Function**

Keynesian's psychological law of consumption, factor effecting law of consumption, Relative Income Hypothesis, Permanent Income Hypothesis, Lifecycle Hypothesis. Investment Function - MEC and MEI; Keynesian multiplier, Accelerator and the Super Multiplier.

##### **Unit – III: Quantity Theory of Money**

Fisher's Cash Transaction Approach, Cash Balance Approach, Keynesian Reformulation of Quantity Theory of Money; Modern Theories of Money – Friedman

##### **Unit – IV: Inflation and Business Cycle**

Inflation: Demand Pull and Cost Push Theories, Effects of Inflation on Production and Distribution, Anti-Inflationary Policy.

Business Cycle: Meaning and Characteristics; Hawtrey's Theory of Trade Cycle

#### Reading List:

1. Mankiw – Macroeconomics, Worth Publishers
2. Froyen – Macro Economics Theories and Policies, Prentice Hall
3. Branson – Macroeconomics, W. W. Norton & Company
4. Barro – Macroeconomics, The MIT Press
5. Sampat Mukharjee – Analytical Macroeconomics New Central Book agency(P) Ltd.
6. Rana and Verma – Macroeconomics Analysis, Vishal Publication
7. R. D. Gupta & A. S. Rana – Keynes Post-Keynesian Economics, Kalyani Publishers

## Four-Year Integrated B.A. B.Ed Course

### Semester -III

#### ECONOMICS (Elective)

#### EC 301: Development Economics

Credits- 6

CH: 4 (L)+(T)

Max. Marks: 100

External : 80

Internal : 20

#### Content:

#### Unit – I: Measuring Development

Economic Growth and Development; The Evolution of Measures of Development – Per Capita Income –Basic Needs Approach – Physical Quality of Life Index – Human Development Index – Gender Development Index – Gender Empowerment Measures

#### Unit – II: Theories of Growth and Development

Stages of Growth: Rostow, Mark.; Vicious Circle of Poverty; Critical minimum effort hypothesis; Big push theory; Balanced vs. Unbalanced Growth

#### Unit – III: Dual Economy Models

Structural approach of Development, Rural and urban interaction; Formal and informal sectors; Lewis model and its extension by Ranis and Fei; Issues in migration: Harris and Todaro Model

#### Unit – IV: Development and Environment

Sustainable development: Basic concepts, Outcome approach and Opportunity approach to sustainable development; Environmental accounting: Basic concepts and measurement; Market valuation approach and Maintenance approach; Poverty and Environment: Common property rights.

#### Reading List:

1. Basu, Kaushik (2002) – Analytical Development Economics, The Less Developed Economy Revisited Oxford University Press.
2. Chakraborty, S. – Development Planning, Oxford University Press, India.
3. Ghatak, S. (1986) – An Introduction to Development Economics, Allen and Unwin, London.
4. Human Development Reports, Technical Notes: UNDP – various issues
5. Meier, G.M. and J. E. Rauch (2005) – Leading Issues in Economics Development, (8<sup>th</sup> Edition), Oxford University Press, New Delhi.
6. Ray Debraj (1998) – Development Economics Oxford University Press.
7. Todaro, M.P. and S.C. Smith (2003), (8<sup>th</sup> Edition) – Economic Development, Pearson Education, Delhi.
8. Thirwal, A.P. (1999), (6<sup>th</sup> Edition) – Growth and Development, Macmillan, U.K.
9. W. Arthur Lewis – Economic Development with Unlimited Supply of Labour in Agarwal and Singh (ed.) Economics of Underdevelopment, Oxford University Press.
10. Misra & Puri – Development Economics.

## Four-Year Integrated B.A. B.Ed Course

### Semester -IV

#### ECONOMICS (Elective)

#### EC 401: Indian Economy

Credits- 6

CH: 4 (L)+(T)

Max. Marks: 100

External : 80

Internal : 20

#### Content:

#### **Unit – I: Structure and Trends of Indian Economy**

Nature and broad characteristics of Indian Economy; Demographic: structure and problems; National Income: Trends and Composition, Poverty and unemployment.

#### **Unit – II: Indian Agriculture, Industry and Service Sectors**

Agriculture: Agricultural production and productivity, Size of farms, Land reforms, Green Revolution  
Industry: industrial Development during planning period, Industrial Policy, Growth and Problems of Large, Small scale and cottage industries.

Service Sector: Foreign Trade of India – Composition and Direction of India's foreign trade, EXIM policy and foreign trade policy, WTO and its impact on various aspect of Indian economy

#### **Unit – III: Financial System: Its Components and Operation**

Money Market: structure, role of RBI, Monetary policy of RBI, Indian monetary system,

Capital Market: Structure, SEBI and capital market reforms, mutual funds, OTECI, NBFC, IRDA; Foreign

Capital: FDI, FII; Capital Account Convertibility

#### **Unit – IV: Indian Economic Policies**

Economic Reforms with respect to Industry: LPG, issues related to privatisation, disinvestment of PSUs etc.

Trade: WTO and issues related to FDI and FPI, and Trade composition and direction.

Finance: Banking Sector Reforms , digitisation

#### Reading List:

1. R. Dutt & K.P.M. Sundaram – Indian Economy, S. Chand & Co. Delhi
2. Mishra & Puri – Indian Economy, Himalaya Publishing House, Mumbai
3. Uma Kapali (ed.) – Indian Economy Since Independence, Academic Foundation, Delhi



## Four-Year Integrated B.A.B.Ed Course

### Geography Elective Paper Syllabus

SEM.	Course Code	Course Name	Title of the paper	Contact hours	Credits	Marks			
						Internal	External	Total	
<b>1<sup>st</sup> Semester</b>	<b>GEO 101</b>	Geography	Geomorphology	4(L)	<b>4</b>	<b>16</b>	<b>64</b>	<b>80</b>	<b>100</b>
	<b>GEO 101P</b>	Geography Practical	Basic Cartography	2(P)	<b>2</b>		<b>20</b>	<b>20</b>	
<b>2<sup>nd</sup> Semester</b>	<b>GEO 201</b>	Geography	Climatology and Oceanography	4(L)	<b>4</b>	<b>16</b>	<b>64</b>	<b>80</b>	<b>100</b>
	<b>GEO 201P</b>	Geography Practical	Interpretation of weather maps	2(P)	<b>2</b>		<b>20</b>	<b>20</b>	
<b>3<sup>rd</sup> Semester</b>	<b>GEO 301</b>	Geography	Environment & Ecosystem	4(L)	<b>4</b>	<b>16</b>	<b>64</b>	<b>80</b>	<b>100</b>
	<b>GEO 301P</b>	Geography Practical	Basic Statistics	2(P)	<b>2</b>		<b>20</b>	<b>20</b>	
<b>4<sup>th</sup> Semester</b>	<b>GEO 401</b>	Geography	Geographical Thought	4(L)	<b>4</b>	<b>16</b>	<b>64</b>	<b>80</b>	<b>100</b>
	<b>GEO 401P</b>	Geography Practical	Interpretation of SOI Topographical Maps	2(P)	<b>2</b>		<b>20</b>	<b>20</b>	

**Four-Year Integrated B.A. B.Ed Course**

**1<sup>st</sup> Semester**  
**GEOGRAPHY**  
**GEO 101: Geomorphology**

**Credits- 4**  
**CH: 4 (L)**

**Max. Marks: 80**  
**External : 64**  
**Internal : 16**

**Course Content**

**UNIT – 1: Concepts in Geomorphology**

1. Definition and Scope of Geomorphology, Fundamental Concepts in Geomorphology
2. Internal Structure of the Earth, Earth Movement
3. Continental Drift Theory, Plate Tectonic Theory
4. Types of Folds and Faults and associated Landforms

**UNIT – 2: Geomorphological Processes and Landforms**

1. Weathering and Mass Movement
2. Fluvial action, Fluvial Cycle of Erosion
3. Wind Action, Arid Cycle of Erosion
4. Wave Action, Coastal Cycle of Erosion

**UNIT – 3: Drainage Systems and Patterns**

1. Sequent Drainage Systems
2. Insequent Drainage systems
3. Drainage Patterns and Channel Patterns
4. Classification of Valleys, Graded Stream

**UNIT – 4: Applied Geomorphology**

1. Concept of Applied Geomorphology, Different Branches of Applied Geomorphology
2. Geomorphology and Hazard Management
3. Geomorphology and Hydrology
4. Geomorphology and Engineering Works

**References:**

1. Dayal, P. (2011): A Text Book of Geomorphology, Rajesh Publication, New Delhi.
2. Singh, S. (1997): Physical Geography, Prayag Pustak Bhawan, Allahabad.
3. Singh, S. (2009): Geomorphology, Prayag Pustak Bhawan, Allahabad.
4. Ahamed, E. (2001): Geomorphology, Kalyani Publishers, Kolkata.
5. Ahamed, E. (1989): Physical Geography, Kalyani Publishers, New Delhi.
6. Monkhouse, F. J. (1971): Principles of Physical Geography, University of London Press Ltd.
7. Morgan, R.S. and Wooldridge, S.W. (1988): An Outline of Geomorphology, Orient Longman.
8. Thornbury, W. D. (1984): Principles of Geomorphology, 2<sup>nd</sup> Edition, Wiley Eastern Ltd., New Delhi.

**Four-Year Integrated B.A. B.Ed Course**

**1<sup>st</sup> Semester**

**GEOGRAPHY PRACTICAL**

**GEO 101P: Basic Cartography**

**Credits : 2**

**CH: 2P**

**Max. Marks: 20**

**Course content**

1. Meaning and Classification of Maps: Atlas, Wall Maps, Topographical Maps and Cadastral Maps
2. Principle of Topographical Sheet Numbering, Conventional Signs used in Topographical Sheets
3. Construction of Graphical Scales: Plain Scales, Comparative Scale, Diagonal Scale and Vernier Scale.
4. Construction of Projections: Simple Conical Projection With One Standard Parallel, Bonne's Projection, Polyconic Projection, Cylindrical Equal Area Projection and Stereographic Projection.

**References:**

1. Mitra, K., Ghosh, K. and Das, M. (2006): B.A. Honours Practical Geography, Kalyani Publishers, Kolkata.
2. Mitra, K., Ghosh, K. and Das, M. (2006): B.A. General Practical Geography, Kalyani Publishers, Kolkata.
3. Bandhopadhyaya, T. and Sil, A. K. (2004): Byaboharik Bhugol Parichaya (Bengali), Chhaya Prakasoni.
4. Sarkar, A. (1998): Practical Geography- A Systematic Approach, Orient Longman.
5. Singh, R. P.B and Singh. R. L (2002): Elements of Practical Geography, Kalyani Publishers, New Delhi.
6. Hazra, Y. and Das, D. (2007): Snatak Byaboharik Bhugol (Bengali), Chhaya Prakashoni, Kolkata.

## **Four-Year Integrated B.A. B.Ed Course**

2<sup>nd</sup> Semester

**GEO 201: Climatology & Oceanography (Elective)**

**Credits- 4**

**CH: 4 (L)**

**Max. Marks: 80**

**External : 64**

**Internal : 16**

### **UNIT-I : Foundations of Climatology**

- Climate and Weather : Elements and factors of Climate and Weather
- Atmosphere : Its structure and composition
- Insolation and Heat budget of the earth

### **UNIT-II : Air Circulation and Climatic classifications**

- Heat zones, pressure belts and planetary winds; Jet streams
- Air masses and Fronts: origin, growth, types and characteristics of Air masses ;
- Koppen & Thornthwate classification of climate : basis of classification, types of climate and their characteristics, Cyclones and Anticyclones

### **UNIT –III: Oceanography**

- Definition of oceanography. Surface configuration of the ocean floor, continental shelf, continental slope, abyssal plain, mid-oceanic ridges and oceanic trenches. Relief of Atlantic, Pacific and Indian Oceans.

### **UNIT-IV : Physical characteristics of oceans**

- Temperature and Salinity of oceans and seas: controlling factors and global variation
- Circulation of oceanic waters: causes and type of Waves, Tides. Their characteristics and distribution. Currents ; Causes of ocean currents and Currents of the Atlantic, Pacific and Indian oceans. Marine deposits, coral reef, atolls etc.

### **Reference**

Trewartha, G. T. : An introduction to Climate

Berry, R.G. & R.J. Chorley : Atmosphere, Weather and Climate

Menon, P.A. : The Weather

Austin Miller : Climatology

Chritch field : General climatology

1. Anikouchine, W.A. and Sternberg, R.W. : The world Oceans – An introduction to Oceanography, Englewood cliff, N.J. 1973
2. Gerald, S. : General Oceanography – An introduction, John Wiley & Sons, New York 1980
3. Garrison, T. : Oceanography, Wadsworth.com. USA 1998
4. King, C.A.M. : Beaches and Coasts, E. Arnold, London, 1972
5. King, C.A.M. : Oceanography for Geographers E. Arnold, London 1975
6. Sharma, R.C. Vital, M. : Oceanography for Geographers, Chetnya publishing house Aliahabad, 1970

**Four-Year Integrated B.A. B.Ed Course**

**2<sup>nd</sup> Semester**

**GEO 201P: Interpretation of weather maps (Elective)**

**Credits- 2**

**Max. Marks: 20**

**CH: 2(P)**

**Climatic Diagrams**

1. Temperature and rainfall graph
2. Drawing of Hythergraph, Climograph, Windrose diagrams.

**Weather Maps**

3. Interpretation of weather maps
4. Drawing of isobars, isotherms and isohyets
5. Weather observation equipments.

**Note:**

Experiments =15 marks

Practical Note Book +Viva-Voce = 05

**References:**

1. Monkhouse, F.J. : Maps & Diagrams
2. Singh, R.L. & R.P.B. Singh : Practical Geography

**Four-Year Integrated B.A. B.Ed Course**

**3<sup>rd</sup> Semester**

**GEOGRAPHY**

**GEO 301: Environment and Ecosystem**

**Credits- 4**

**CH: 4 (L)**

**Max. Marks: 80**

**External : 64**

**Internal : 16**

**Course Content**

**UNIT-1:**

Basic concept: Environment and Ecosystem; Components of Ecosystem; Structure and function of Ecosystem; Energy and nutrients in the ecosystem-Bio geochemical cycles.

**UNIT-2:**

Types and Major Natural Ecosystem: Forest, Grassland, Desert and Aquatic Ecosystem; Human-environment relationship in different Biomes-Adaptation in different biomes.

**UNIT-3:**

Environmental Pollution: Causes, Consequences and mitigation of Air, Water, Land; Greenhouse gases and global warming.

**UNIT-4:**

Extreme Events of Environment: Drought and desertification, drought preparedness and monitoring; flash floods: causes, effects, flood control and its management; cyclones: Causes, effects and management; heat waves: causes, effects and management.

**References :**

1. Chandna,R. C., 2002. Environment Geography..Kalyani Publisher, Ludhiana.
2. Cunningham W.P and Cunningham M.A., 2004. Principles of Environmental Science: Inquiry and Applications. Tata Macgraw Hill, New Delhi
3. Kormandy, Edward J. 2012. Concepts of Ecology.PHI Learning Pvt.Ltd., New Delhi.
4. Odum,E.P.et al.2005. Fundamentals of Ecology.CeneageLearning,India.
5. Sharma,P.D.,2015.Ecology and Environment. Rastogi Publications, Meerut.
6. Singh, S. 1997. Environmental Geography, Prayag PustakBhavan, Allahabad.

## Four-Year Integrated B.A. B.Ed Course

4<sup>th</sup> Semester

### GEOGRAPHY

#### **GEO 401: Geographical Thought**

Credits- 4

CH: 4 (L)

Max. Marks: 80

External : 64

Internal : 16

#### **Course Content**

##### **UNIT – I: Evolution of Geographical Thought**

Contribution of Greek and Roman Scholars during Ancient Period, Contribution of Arabian Scholars during the Medieval Period, Foundation of modern geography; colonial expansion and development of geography; Emergence of scientific geography—Humboldt, Ritter, Ratzel, Richtofen and Huntington.

##### **UNIT – 2: Dichotomy between Determinism and Possibilism**

Environmental Determinism and Possibilism, Neo Determinism, Probabilism, Cultural and Social determinism.

##### **UNIT-3: Quantitative Revolution and Regional Concept**

Historical perspective, Merits and Demerits of Quantitative Revolution, Concept and theory of System Analysis, Attributes of Region, Classification of Region and Regionalism.

##### **UNIT-4: Modern Themes in Geographical Thought**

Positivism, Pragmatism, Functionalism, Existentialism, Radicalism and Human Ecology

#### **References :**

1. Dikshit R. D., 1997: Geographical Thought: A Contextual History of Ideas, Prentice– Hall India.
2. Hartshone R., 1959: Perspectives of Nature of Geography, Rand MacNally and Co.
3. Hussain M., 2008: Evolution of Geographical Thought, Rawat Publication.
4. Johnston R. J., (Ed.): Dictionary of Human Geography, Routledge.
5. Johnston R. J., 1997: Geography and Geographers, Anglo-American Human Geography since 1945, Arnold, London.
6. Kapur A., 2001: Indian Geography Voice of Concern, Concept Publications.
7. Martin Geoffrey J., 2005: All Possible Worlds: A History of Geographical Ideas, Oxford.
8. Soja, Edward 1989. Post-modern Geographies, Verso, London. Reprinted 1997: Rawat Publ., Jaipur and New Delhi.

## Four-Year Integrated B.A. B.Ed Course

### 4<sup>th</sup> Semester

#### GEO 401P: Interpretation of SOI Topographical Maps (Elective)

Credits- 2  
CH: 2(P)

Max. Marks: 20

**Note:**

Experiments =15 marks

Practical Note Book +Viva-Voce = 05

### Structure of Geography (Honours) Syllabus

SEM	Course Code	Course Name	Title of the paper	Contact hours	Credits	Marks			
						Internal	External	Total	
1 <sup>st</sup> Semester	HGEO 101	Geography I	Geotectonics & Geomorphology	4L	4	16	64	80	100
	HGEO 101P	Geography Practical I	Basic Cartography	2P	2		20	20	
2 <sup>nd</sup> Semester	HGEO 201	Geography II	Regional Geography of India	4L	4	16	64	80	100
	HGEO 201P	Geography Practical II	Interpretation of SOI topographical maps (Plain)	2P	2		20	20	
3 <sup>rd</sup> Semester	HGEO 301	Geography III	Geography of Natural Resources	4L	4	16	64	80	100
	HGEO 301P	Geography Practical III	Basic of Statistics in Geography	2P	2		20	20	
	HGEO 302	Geography IV	Population Geography	4L	4	16	64	80	100
	HGEO 302P	Geography Practical IV	Practicals on Population Geography	2P	2		20	20	
4 <sup>th</sup> Semester	HGEO 401	Geography V	Settlement Geography	4L	4	16	64	80	100
	HGEO 401P	Geography Practical V	Practicals on Settlement Geography	2P	2		20	20	
	HGEO 402	Geography VI	Social & Cultural Geography	4L	4	16	64	80	100
	HGEO 402P	Geography Practical VI	Field Report	2P	2		20	20	
5 <sup>th</sup> Semester	HGEO 501	Geography VII	Hydrology	4L	4	16	64	80	100
	HGEO 501P	Geography Practical VII	Practicals on Hydrology	2P	2		20	20	
	HGEO 502	Geography VIII	Regional Geography of Asia and Europe	4L	4	16	64	80	100
	HGEO 502P	Geography Practical VIII	Survey- I: Prismatic compass & Leveling	2P	2		20	20	
	HGEO 503	Geography IX	Economic Geography	4L	4	16	64	80	100
	HGEO 503P	Geography Practical IX	Practicals on Economic Geography	2P	2		20	20	
6 <sup>th</sup> Semester	HEG 601	Geography X	Regional Geography of North & South America	4L	4	16	64	80	100
	HEG 601P	Geography Practical X	Application of RS in Geography	2P	2		20	20	
	HEG 602	Geography XI	Introduction to RS & GIS	4L	4	16	64	80	100
	HEG 602P	Geography Practical XI	Application of GIS in Geography	2P	2		20	20	
	HGEO 603D	Geography XII	Dissertation/Project	4	2	10	40		50
7 <sup>th</sup> Semester	HGEO 701	Geography XIII	Applied Climatology & Oceanography	4L	4	16	64	80	100
	HGEO 701P	Geography Practical XIII	Interpretation Weather maps & RS images	2P	2		20	20	
	HGEO 702	Geography XIV	Disaster Management	4L	4	16	64	80	100
	HGEO 702P	Geography Practical XIV	Survey II – Theodolite & GPS	2P	2		20	20	
8 <sup>th</sup> Semester	HGEO 801	Geography XV	Geography of Africa & Oceania	4L	4	16	64	80	100
	HGEO 801P	Geography Practical XV	Interpretation of topographical map (Plateau Region)	2P	2		20	20	



	<b>HGEO 802</b>	Geography XVI	Geography of North-East India	<b>4L</b>	<b>4</b>	<b>16</b>	<b>64</b>	<b>80</b>	<b>100</b>
	<b>HFEO 802P</b>	Geography XVI	Quantitative Techniques in Geography	<b>2P</b>	<b>2</b>		<b>20</b>	<b>20</b>	
			<b>Total</b>		<b>92</b>	<b>250</b>	<b>1300</b>		<b>1550</b>

**Four-Year Integrated B.A., B.Ed Course**

1<sup>st</sup> Semester

**GEOGRAPHY -I (Honours)**

**HGEO 101: Geotectonics and Geomorphology**

**Credits- 4**

**CH: 4 (L)**

**Max. Marks: 80**

**External : 64**

**Internal : 16**

**Course Content**

**UNIT – 1: Geotectonics**

1. Geological History of the Earth
2. Internal Structure of the Earth
3. Continental Drift Theory, Plate Tectonic Theory
4. Types of Rocks, Folds, Faults and Associated Landforms

**UNIT – 2: Geomorphological Concepts**

1. Fundamental Concepts in Geomorphology
2. Processes of Denudation: Weathering, Mass Wasting and Erosion
3. Slope Development: Davis, Penck and King
4. Normal Cycle of Erosion: Fluvial Cycle and Interruptions

**UNIT – 3: Geomorphic Processes and Landforms**

1. Fluvial and Glacial Action
2. Wind Action and Arid Cycle of erosion
3. Action of Ground Water and Karst Cycle of erosion
4. Wave Action and Coastal Cycle of erosion

**UNIT – 4: Applied Geomorphology**

1. Geomorphology and Hazard Management
2. Geomorphology and Hydrology
3. Geomorphology and Engineering Works
4. Geomorphology and Urbanization

**References:**

1. Dayal, P. (2011): A Text Book of Geomorphology, Rajesh Publication, New Delhi.
2. Singh, S. (1997): Physical Geography, Prayag Pustak Bhawan, Allahabad.
3. Singh, S. (2009): Geomorphology, Prayag Pustak Bhawan, Allahabad.
4. Ahamed, E. (2001): Geomorphology, Kalyani Publishers, Kolkata.
5. Ahamed, E. (1989): Physical Geography, Kalyani Publishers, New Delhi.
6. Monkhouse, F. J. (1971): Principles of Physical Geography, University of London Press Ltd.
7. Morgan, R.S. and Wooldridge, S.W. (1988): An Outline of Geomorphology, Orient Longman.
8. Thornbury, W. D. (1984): Principles of Geomorphology, 2<sup>nd</sup> Edition, Wiley Eastern Ltd., New Delhi.

**Four-Year Integrated B.A., B.Ed Course**

**1<sup>st</sup> Semester**

**GEOGRAPHY PRACTICAL –I**

**HGEO 101P: Basic cartography**

**Credits : 2**

**Max. Marks: 20**

**CH: 2P**

1. Meaning and Classification of Maps: Atlas, Wall Maps, Topographical Maps and Cadastral Maps
2. Principle of Topographical Sheet Numbering, Conventional Signs used in Topographical Sheets
3. Construction of Graphical Scales: Plain Scales, Comparative Scale, Diagonal Scale and Vernier Scale.
4. Construction, Properties and Uses of Projections: Simple Conical Projection With One Standard Parallel, Bonne's Projection, Polyconic Projection, Sinusoidal Projection, Cylindrical Equal Area Projection and Stereographic Projection.

(Practical Note Book -02; Viva –Voice -03)

**References:**

1. Mitra, K., Ghosh, K. and Das, M. (2006): B.A. Honours Practical Geography, Kalyani Publishers, Kolkata.
2. Mitra, K., Ghosh, K. and Das, M. (2006): B.A. General Practical Geography, Kalyani Publishers, Kolkata.
3. Bandhopadhyaya, T. and Sil, A. K. (2004): Byaboharik Bhugol Parichaya (Bengali), Chhaya Prakasoni.
4. Sarkar, A. (1998): Practical Geography- A Systematic Approach, Orient Longman.
5. Singh, R. P.B and Singh. R. L (2002): Elements of Practical Geography, Kalyani Publishers, New Delhi.
6. Hazra, Y. and Das, D. (2007): Snatak Byaboharik Bhugol (Bengali), Chhaya Prakashoni, Kolkata.

**Four-Year Integrated B.A., B.Ed Course**

2<sup>nd</sup> Semester

**GEOGRAPHY -II (Honours)**

**HGEO 201: Regional Geography of India**

**Credits- 4**

**CH: 4 (L)**

**Max. Marks: 80**

**External : 64**

**Internal : 16**

**Course content:**

**UNIT – 1: Physiography of India**

Locational Significance of India, Physiographic Divisions, Drainage Types and Systems, Soil Types, Characteristics and Distribution.

**UNIT –2: Climate of India**

Factors influencing Climate, Characteristics of Monsoon, Climatic Regions of India. Droughts and Floods in India.

**UNIT – 3: Natural Resources of India:**

Natural Vegetation: Classification and Distribution, Mineral Resources: Distribution and Utilization (Iron Ore, Manganese, Bauxite, Mica, Petroleum, Natural Gas).

**UNIT – 4: Economy of India:**

Growth and Distribution of Population, Agricultural Types and Characteristics, Major Crops: Food Crop and Cash Crop, Agricultural Regions, Major Industries: Iron Ore, Textiles. Automobile, Petrochemical, Transport: Types and Significance.

**References:**

1. Govt. of India. (1965) .The Gazetteer of India, Vol I & III Publication Division, New Delhi.,
2. Khullar, D.R. (2001).India – A Comprehensive Geography, Kalyani Publishers, Kolkata. Mamoria, C. B. (1975). Geography of India, Shiva Lal Agarwala and Company, Agra, India.
3. Mitra A. (1967). Levels of Regional Development India, Census of India, Vol I, Part I- A(i) and (ii) New Delhi.
4. Sharma T C. (1997). Economic and Commercial Geography of India, O. Coutinho Vikas Publishing House Pvt. Ltd. New Delhi.
5. Singh R.L. (ed.). (1971). India: A Regional Geography, National Geographical Society. India, Varanasi.
6. Spate O.H.K. and Learmonth A.T.A (1967). India and Pakistan- Land, People and Economy, Methuen & Co. London.
7. Wadia D.N. (1967). Geology of India, McMillan & Co., London.

**Four-Year Integrated B.A. B.Ed Course**

**2<sup>nd</sup> Semester**

**GEOGRAPHY PRACTICAL –II (Honours)**

**HGEO 201P: Interpretation of SOI topographical maps (Plain)**

**Credits : 2**

**Max. Marks: 20**

**CH: 2P**

Interpretation of Survey of India Topographical Map of Plain Region from India:

1. Broad Physiographic Divisions (Flood Plains and Doabs) and their physical characteristics.
2. Drainage characteristics, fluvial features (both in-channel and out-channel)
3. Settlement Types and associated facilities
4. Transport and Communication Network
5. Relation among the physical and cultural features

(Practical Note Book -02; Viva –Voice -03)

**References:**

1. Sarkar, A.: Practical Geography – A Systematic Approach. Orient Longman Ltd. 1998.
2. Singh, R. L. and Rana. P. B.: Elements of Practical Geography. Kalyani Publishers, New Delhi. 2002.

## **Four-Year Integrated B.A. B.Ed Course**

**3<sup>rd</sup> Semester**

### **GEOGRAPHY -III (Honours)**

#### **HGEO 301: Geography of Natural Resources**

**Credits- 4**

**CH: 4 (L)**

**Max. Marks: 80**

**External : 64**

**Internal : 16**

#### **Unit –1:**

Natural Resources: Concept and classification; Approaches to resource utilization-Utilitarian, Conservational, Community based adaptive; Significance of resources.

#### **Unit-2:**

Distribution, utilization, problems and management of natural resources: Land, Water, Forest.

#### **Unit-3:**

Distribution, utilization, problems and management of energy resources: Conventional -Coal, Petroleum, Natural Gas and Non-Conventional-Solar energy, Wind energy, Tidal energy, Geothermal energy.

#### **Unit-4:**

Resource Crisis and need for conservation; Appraisal and conservation of natural resources; Limits to growth and sustainable resource use of resources

#### **References:**

1. Blanco, E. and Razzaque., J. (2011): Globalization and National Resources, Law, Challenges, Key Issues and Perspective, Edward Elgar Publ., U.K.
2. Brundtland, G.H. (1987): Our Common Future, UNCED Report, Geneva.
3. Chiras, D.D. and Reganold., J.P. (2009): Natural Resource Conservation: Management for a Sustainable Future, 10th ed, Pearson.
4. Cutter, S. N., Renwich H. L. and Renwick., W. (1991): Exploitation, Conservation, Preservation: A Geographical Perspective on Natural Resources Use, John Wiley and Sons, New York.
5. Gadgil, M. and Guha, R. (2005): The Use and Abuse of Nature: Incorporating This Fissured Land: An Ecological History of India and Ecology and Equity, Oxford University Press. USA.
6. Gautam, Alka.(2017): Geography of Resources: Exploitation, Conservation and Management, Sharda Pustak Bhawan, Allahabad.
7. Holechek, J. L. C., Richard, A., Fisher, J. T. and Valdez R. (2003): Natural Resources: Ecology, Economics and Policy, Prentice Hall, New Jersey.
8. Jones, G. and Hollier, G. (1997): Resources, Society and Environmental Management, Paul Chapman, London.
9. Klee, G. (1991): Conservation of Natural Resources, Prentice Hall, Englewood.
10. Mather, A. S. and Chapman, K. (1995): Environmental Resources, John Wiley and Sons, New York.
11. Mitchell, B. (1997): Resource and Environmental Management, Longman Harlow, England.
12. Owen, S. and Owen, P. L. (1991): Environment, Resources and Conservation, Cambridge University Press, New York.
13. Rees, J. (1990): Natural Resources: Allocation, Economics and Policy, Routledge, London.
14. Roy, Prithvish. (2005): Economic Geography: A Study of Resources, New Central Book Agency, Kolkata.
15. Simmons, I.G. (1980): The Ecology of Natural Resources, Edward Arnold, London.
16. Simmons, I.G. (1991): Earth, Air and Water: Resources and Environment in the 20th Century, Edward Arnold, London.
17. Smith, G.H. (1962): Conservation of Natural Resources, John Wiley, New York.

**Four-Year Integrated B.A. B.Ed Course**

**3<sup>rd</sup> Semester**

**GEOGRAPHY PRACTICAL –I (Honours)**

**HGEO 301P: Application of Statistics in Geography**

**Credits : 2  
CH: 2P**

**Max. Marks: 20**

(Practical Note Book -02; Viva –Voice -03)

**Four-Year Integrated B.A. B.Ed Course**

**3<sup>rd</sup> Semester**

**GEOGRAPHY -IV (Honours)**

**HGEO 302: Population Geography**

**Credits- 4**

**CH: 4 (L)**

**Max. Marks: 80**

**External : 64**

**Internal : 16**

**Course Content**

**UNIT – 1:**

Population Geography: Definition, nature and scope; relationship with other disciplines

**UNIT – 2:**

Population composition: Age, Sex, Literacy, rural, urban, work partition.

**UNIT – 3:**

Population growth, population distribution and density of Population.

**UNIT – 4:**

Components of population change: fertility, mortality and migration

Population theories: Malthus, demographic transition.

**References :**

1. Bhende, Asha A. and Kanitkar, T. (1997): Principles of Population Studies, Himalaya Publishing House, Mumbai.
2. Chandna, R. C. (2013): Geography of Population, Kalyani Publishers, New Delhi.
3. Mitra, A. (2004): India's Population, Abhinav Publisher, Nagpur.
4. Shrivastava, O. S. (1996): Demography and Population studies, Vikash Publishing House Pvt. Ltd., Bhupal.
5. Yadav, J. P. (2004): Population Geography, Anmol Publication Pvt. Ltd., New Delhi.
6. Clark, J. I. (1973): Population Geography, Pergamon Press, Oxford.
7. Mitra, A. (1978): India's Population, Vol. I and II, Abhinav Publisher, Nagpur.
8. Zelinsky, W. (1966): A prologue to Population Geography, Prentice Hall.



**Four-Year Integrated B.A. B.Ed Course**

**3<sup>rd</sup> Semester**

**GEOGRAPHY PRACTICAL –IV (Honours)**

**HGEO 302P: Practical on Population Geography**

**Credits : 2**

**Max. Marks: 20**

**CH: 2P**

1. Population pyramids, sex ratio, work participation rate
2. Population growth rate: Absolute and Compound
3. Population distribution by dot and sphere method
4. Density of Population by choropleth method
5. Infant mortality rate, maternal mortality rate, total fertility rate

(Practical Note Book -02; Viva –Voice -03)

**References :**

1. Monkhouse, F.J. (1971): Maps and Diagrams, Methuen, London.
2. Mitra, K., Ghosh, K. and Das, M. (2006): B.A. Honours Practical Geography, Kalyani Publishers, Kolkata.
3. Mitra, K., Ghosh, K. and Das, M. (2006): B.A. General Practical Geography, Kalyani Publishers, Kolkata.
4. Sarkar, A. (1998): Practical Geography- A Systematic Approach, Orient Longman Ltd.
5. Singh, R.L. and Singh, R.P.B. (2002): Elements of Practical Geography, Kalyani Publishers, New Delhi.
6. Saikia, R. and Thakuria, G. (2015): Practical Geography, Eastern Book House, Guwahati.
7. Sarkar, A. (2013): Quantitative Geography: Techniques and Presentations, Orient Black Swan Pvt. Ltd.

## **Four-Year Integrated B.A. B.Ed Course**

**4<sup>th</sup> Semester**

**GEOGRAPHY -V (Honours)**

**HGEO 401: Settlement Geography**

**Credits- 4**

**CH: 4 (L)**

**Max. Marks: 80**

**External : 64**

**Internal : 16**

### **Course Content**

#### **UNIT – 1: Human Settlements:**

Concept of Settlements, Evolution and growth of Human Settlements, Types of Settlement: rural and urban, rural-urban fringe, rural-urban continuum

#### **UNIT – 2: Rural Settlements:**

Definition, nature and characteristics of rural settlements, Morphology of rural settlements: site and situation, layout-internal and external, Rural house types in India by geographical regions

#### **UNIT – 3: Urban Settlements:**

Census definition and categories in India, Theories of urban growth: Concentric Zone Theory; Sector Theory; Multiple Nuclei Theory, Metropolitan concept, City-region and Conurbation, Functional Hierarchy of Urban Settlement with Special Reference to Christaller's Central Place Theory

#### **UNIT – 4: Issues related to Settlement Systems in India:**

Urban problems of housing: Slums, Urban civic amenities (water and transport), Concept of Smart Cities; Socio-economic segregation of rural settlements, Rurban Mission

### **References:**

1. Carter, H. (1995) : The Study of Urban Geography, Arnold, London.
2. Daniel, P.A. and Hopkinson, M.F. (1989) The Geography of Settlement, Oliver & Boyd, London.
3. Johnston, R; Gregory D, Pratt, G. et al. (2008) The Dictionary of Human Geography, Blackwell Publication.
4. DeBlij, H.J. (1994) : *Geography: Regions and Concepts*, John Wiley, New York,.
5. Gillett J. (1988): Urban & Rural Geography, Longman
6. Hall T. (2006) : Urban Geography, Taylor and Francis
7. Hudson, F.S. (1977): A Geography of Settlements, Macdonald & Evans Ltd., Plymouth
8. Johnson, J.H. (1977): Urban Geography - An Introductory Analysis, Pergamon press, Oxford
9. Johnston, R.J. (1984): Urban Geography, Penguin, London
10. Mandal, R.B. (2001): Introduction to Rural Settlements, Concept Publishing Company, New Delhi
11. Mandal, R.B. 2001. Urban Geography, 2nd ed, Concept Publishing Company.
12. Ramachandran, R. (1989): Urbanisation and Urban Systems of India, Oxford University Press, New Delhi
13. Ramachandran, R. (1992) : The Study of Urbanisation, Oxford University Press, Delhi
14. Singh, R. Y. (1994) : Geography of Settlements, Rawat Publications, New Delhi.
15. Singh, R.B. (Ed.) (2015) Urban development, challenges, risks and resilience in Asian megacities. Advances in Geographical and Environmental Studies, Springer.

**Four-Year Integrated B.A. B.Ed Course**

4<sup>th</sup> Semester

**GEOGRAPHY PRACTICAL –V (Honours)**

**HGEO 401P: Practicals on Settlement Geography**

**Credits : 2**  
**CH: 2P**

**Max. Marks: 20**

**Course Content**

**UNIT – 1: Measures of Spatial Distribution and Interaction**

Nearest Neighbour analysis, Rank Size Rule (Zipf, Berry-Garison), Gravity and Potential Models

**UNIT – 2: Measures of Concentration**

Urban Density, Urban Intensity Index

**UNIT – 3: Functional Analysis of Settlements**

Nelson's Functional Classification of Towns, Ashok Mitra's Classification of Towns, Rural Service Centre: hierarchy, classification and ordering

**UNIT – 4: Analysis of Urbanization**

State-wise/District-wise variation and trends of urbanisation; Temporal analysis of urban growth using Census data of India (Annual and Decadal)

(Practical Note Book -02; Viva –Voice -03)

**References:**

1. Kaplan, D., Holloway, S. (2014) : Urban Geography, 3rd ed, Wiley.
2. Latham, A., McCormack, D., McNamara, K. McNeill, D. (2009): Key Concepts in Urban Geography, Sage.
3. Mahmood, A. (1998): Statistical Methods in Geographical Studies, Rajesh Publication
4. Monkhouse, F.J., Wilkinson, H.R. (1971): Maps and Diagrams: Their Compilation and Construction, 3rd ed (2017 reprint), Alphaneumera-Kolkata.
5. Sarkar, A. (2008): Practical Geography: A Systematic Approach, Orient BlackSwan, Kolkata
6. Sarkar, A. (2013): Quantitative Geography: Techniques and Presentations, Orient BlackSwan, New Delhi
7. Singh, R.L. and Singh, P.B. (2009): Elements of Practical Geography, Kalyani Publishers, New Delhi

**Four-Year Integrated B.A. B.Ed Course**

**4<sup>th</sup> Semester**

**GEOGRAPHY -VI (Honours)**

**HGEO 402: Social & Cultural Geography**

**Credits- 4**

**CH: 4 (L)**

**Max. Marks: 80**

**External : 64**

**Internal : 16**

**Course Content**

**Unit I**

Social geography: Definition, nature and scope.

**Unit II**

Distribution of Social groups: caste, tribe, religion and language of the world.

**Unit III**

Cultural geography: Definition, nature and scope.

**Unit IV**

Concept of cultural hearth and cultural realm; concept of cultural diffusion and its processes.

**References**

1. Chandna, R. C. (2013): Geography of Population, Kalyani Publishers, New Delhi.
2. Broek, J.C. and Webb, J.W. (1978): Geography of Mankind, McGraw Hill, New York.
3. Crang, Mike. (1998): Cultural Geography, Routledge Publications, London.
4. Harmandorf (1989): Tribes of India: The Struggle for survival, Oxford University Press, New Delhi.
5. Hazra, (ed) (1997): Dimensions in Human Geography, Rawat Publication, Jaipur.
6. Jordon, and Lester, G. (1979): The Human Mosaic, Harpar and Row, New York.
7. Massey, et al (ed) (1999): Human Geography Today, Polity Press, Cambridge.
8. Mukherjee, A.B. and Aijazuddin, A. (1985): India: Culture, Society and Economy, Inter-India Publication, New Delhi.
9. Hussain, M. (2011): Human geography, rawat publication, Jaipur.
10. Ahmed, A. ( ....) Social geography, rawat publication, Jaipur
11. Sen, J. (2011), a text book of social and cultural geography, kalyani publishers, New Delhi.

**Four-Year Integrated B.A. B.Ed Course**  
**4<sup>th</sup> Semester**  
**GEOGRAPHY PRACTICAL –VI (Honours)**

**HGEO 402P: Field Report**

**Credits : 2**  
**CH: 2P**

**Max. Marks: 20**

(Practical Note Book -02; Viva –Voice -03)

## Four-Year Integrated B.A.B.Ed Course

### History Elective Paper Syllabus

SEM.	Course Code	Course Name	Title of the paper	Contact hours	Credits	Marks		
						Internal	External	Total
1 <sup>st</sup> Semester	HS 101	History	Themes in early North Indian History (up to 650CE)	4(L)+2(T)	6	20	80	100
2 <sup>nd</sup> Semester	HS 201	History	Colonialism and the National Movement in India (AD 1750 – 1950)	4(L)+2(T)	6	20	80	100
3 <sup>rd</sup> Semester	HS 301	History	Social formation and Cultural pattern of the Pre-modern times	4(L)+2(T)	6	20	80	100
4 <sup>th</sup> Semester	HS 401	History	Making Contemporary India	4(L)+2(T)	6	20	80	100

**Four-Year Integrated B.A., B.Ed. Course**  
**1<sup>st</sup> Semester**  
**History (Elective)**  
**HS 101: Themes in Early North Indian History ( 650 CE)**

**Credits- 4+2**  
**CH: 4 (L) +2(T)**

**Max. Marks: 100**  
**External: 80; Internal: 20**

**UNIT-I:**

- a) Historiography of Early India: Features of Colonial Writings on Early Indian History.
- b) Nationalist Approaches to Early Indian History
- c) Sources: Literature, epigraphic and numismatics

**UNIT-II:**

- a) The Harappan Civilization: Origin, Extent, Urban Life, Socio-Economic and Religious life.
- b) Vedic culture : Early Vedic period.
- c) Society and Economy during Later Vedic Period

**UNIT-III:**

- a) Political structure of the Mahajanpadas
- b) Socio-Religious Reforms Movement: Jainism and Buddhism – Their Impact on Indian Society and Culture.
- c) Mauryan Age – Ashoka's Dhamma.

**UNIT-IV:**

- a) Gupta Political system: State and administrative institutions
- b) Cultural Developments – Art, Architecture, Literature and Religion.
- c) Kushanas and Satavashanes – their Achievements

**Suggested Readings**

1. Agarwal, D.P., The Archaeology of India (Delhi, Select Book Services Syndicate, 1984).
2. Basham, A.L., The Wonder that was India (Mumbai, Rupa, 1971).
3. Chakravarti Uma, The Social Dimensions of Early Buddhism (Delhi, MunshiramManoharlal, 1996).
4. Champakalakshmi, R., Trade, Ideology and Urbanisation: South India 300 BC-AD 1300 (Delhi, OUP, 1996).
5. Chattopadhyaya, B.D., A Survey of Historical Geography of Ancient India (Kolkata, Manisha, 1984).
6. \_\_\_\_\_ The Making of Early Medieval India (Delhi, OUP, 1994).
7. \_\_\_\_\_ History of Science and Technology in Ancient India. (Kolkata, FirmaKLM, 1986).
8. Hartle, J. C., The Art and Architecture of the Indian Subcontinent (Harmondsworth, Penguin, 1987).
9. Jha, D. N. (ed.) Feudal Social Formation in Early India (Delhi, Chanakya, 1988).
10. \_\_\_\_\_ Economy and Society in Early India: Issues and Paradigms (Delhi, MunshiramManoharlal, 1993).
11. Karashima, N., South Indian History and Society, (Studies from Inscriptions AD 850-1800) (Delhi,
12. Kosami, D.D., An Introduction to the Study of Indian History (Mumbai, Popular Prakashan, 1975).
13. Lal, B.B. and Gupta, S.P. (ed.), Frontiers of the Indus Civilization (Delhi. Books & Books, 1984).
14. Maitly, S. K. Economic Life in Northern India in the Gupta Period 300 AD-550 AD (Delhi, MotilalBanarsidass, 1970).
15. Majumdar, R.C., et. al. (eds.), History and Culture of the Indian People, Vols. I, II and III (Mumbai, 1974).
16. Possehl, G.L. (ed.), Ancient Cities of the Indus (Delhi, Vikas, 1979).
17. \_\_\_\_\_ (ed.), Harappan Civilization: A Contemporary Perspective (Delhi, Oxford and IBH, 1993).
18. Ramaswamy, Vijaya. Walking Naked: Women, Society, Spirituality in South India (Simla, IAS, 1997).
19. Ray, HimanshuPrabha. The Winds of Change (Delhi, OUP, 1994).
20. Raychaudhuri, H.C.. Political History of Ancient India (Rev. edn. with commentary by B.N. Mukherjee) (Delhi, 1996).
21. Sahu, B.P. (ed.), Land System and Rural Society in Early India (Delhi. Manohar, 1997).
22. Sastri, K.A.N. (ed.), A Comprehensive History of India. Vol. II. with an updated bibliography Delhi. PPH, 1987)
23. \_\_\_\_\_ (ed.). A History of South India, edn 4 (Chennai. OUP, 1983).
24. Sharma, R.S., Aspects of Political Ideas and Institutions in Ancient India. (Delhi, MotilalBanarsidass, 1991).
25. \_\_\_\_\_ Indian Feudalism ed. 2 (Delhi. Macmillan, 1981).
26. \_\_\_\_\_ Shudras in Ancient India rev edn 2 (Delhi, MotilalBanarsidas. 1980).
27. \_\_\_\_\_ Urban Decay in India c. 300-1000 (Delhi, MunshiramManoharlal, 1987).
28. Thapar, Romila (ed.), Asoka and the Decline of the Mauryas (Delhi, OUP, 1997).
29. \_\_\_\_\_ A History of India, Penguin.
30. Valuthat, Kesavan, The Political Structure of Early Medieval South India (Delhi, Orient Longman,
31. 1993).Yadava, B.N.S., Society and Culture of Northern India in The Twelfth Century (Allahabad, Central Book Depot. 1973).Sheikh Ali, B., History: Concepts and Methods.
32. Singh, Upinder., A History of Early and Early Medieval India.
33. Sreedharan, K., A Historiography, Orient Longman Ltd., Hyderabad.

**Four-Year Integrated B.A., B.Ed. Course**  
**2<sup>nd</sup> Semester**

**History (Elective)**

**HS 201: Colonialism and the National Movement in India (AD 1750-1950)**

**Credits- 4+2**  
**CH: 4 (L) +2(T)**

**Max. Marks: 100**  
**External: 80; Internal: 20**

**UNIT-I:**

- a) Historiography: Understanding Modern India – Colonial, Nationalist and Marxist Approaches.
- b) Sources: Gazetteers, Administrative Manuals, Government Records, Biographies, Newspapers, Oral Sources.

**UNIT-II:**

- a) India and the English East India Company: Administrative Reforms.
- b) The Rural Agrarian Social Structure – Commercialization of Agriculture
- c) Growth of Modern Industries – Drain of Wealth

**UNIT-III:**

- a) Impact of the British Rule in India – Rise of Modern Education
- b) Socio-Religious Reform Movement – Brahma Samaj, Arya Samaj and the Aligarh Movement
- c) Colonial Forest Policies and its impact.

**UNIT-IV:**

- a) National Movement: Revolt of 1857 – Early Nationalists: a) Moderates and b) Extremists
- b) The Gandhian Era and the Satyagraha – Non-Cooperation, Civil Disobedience and Quit India Movements.
- c) The Indian National Army and Revolutionary Nationalism.

**Suggested Readings**

1. Arnold, David and Ramachandra Guha (eds.), *Nature, Culture, Imperialism: Essays on the environmental history of South Asia*, (Delhi, OUP, 1995).
2. Bandyopadhyaya, Sekhar, *From Plassey to Partition: A History of Modern India*
3. Bayly, CA, *Indian Society and the making of the British Empire*, (New Cambridge History of India). II. 1 (Cambridge University Press, 1987).
4. Bipan Chandra, *Communalism in Modern India*, (2nd edn) (Delhi, Vikas, 1987).
5. Bipan Chandra, K.N. Panikkar, Mridula Mukherjee, Sucheta Mahajan and Aditya Mukharjee, *India's Struggle for Independence 1857-1947*, (Delhi, Penguin 1996).
6. Bipan Chandra, *Nationalism and Colonialism in Modern India* (Delhi, Orient Longman, 1981).
7. Bipan Chandra, *Rise and Growth of Economic Nationalism in India*, (Delhi. PPH, 1966).
8. Brass, Paul, *The Politics of India Since Independence*, (Delhi, Foundation Books, 1994).
9. Brown, Judith, *Gandhi and Civil Disobedience: The Mahatma in Indian Politics 1928-34* (Cambridge 1977).
10. Brown, Judith, *Gandhi's Rise to Power, Indian Politics 1915-22* (Cambridge University Press, 1972).
11. Brown, Judith, *Modern India: The Origin of an Asian Democracy*, (Delhi, OUP, 1987).
12. Chakravarty, Suhash, *The Raj Syndrome: A Study in Imperial Perception*, (Delhi, Penguin Overseas, 1991).
13. Desai, A.R., *Peasant Struggles in India*, (Delhi. OUP, 1979).
14. Chaudhuri, N., 'European Trade in India', in Tapan Raychaudhuri and Irfan Habib (eds.) *Cambridge Economic History of India*, Vol. 1 (Delhi. S. Chand, 1984).
15. Desai. A.R., *Social Background of Indian Nationalism*, (Mumbai, Popular Prakashan. 1986).
16. Dube, Ishita Banerjee., *A History of Modern India*
17. Dutt, R.P., *India Today*, (Kolkata, Manisha Granthalaya, 1979).
18. Fisher, M.H.(ed.), *Politics of the British Annexation of India 1757-1857*, (Oxford in India Readings). (Delhi, OUP, 1993).
19. Frankel, Francine, *India's Political Economy, 1947-77: The Gradual Revolution*, (Mumbai. CUP, 1984). Gallagher, J. G. Johnson. Anil Seal (eds), *Locality, Province and Nation: Essays in Indian Politics, 1870-1940*, (Cambridge, 1973)
20. Gandhi, Mohandas K., *Autobiography or The Story of My Experiments with Truth*, (London 1966; Ahmedabad, Navajivan 1981).
21. Guha Ranajit and Gayatri C. Spivak (eds), *Selected Subaltern Studies* (Delhi, OUP, 1988).
22. Guha, Ranajit., *Elementary Aspects of Peasant Insurgency in Colonial India*, (Delhi. OUP, 1983).
23. Guha, Ranajit., *Rule of Property for Bengal: An Essay on the Idea of Permanent Settlement*, (Delhi, Orient Longman, 1982).
24. Hardy, Peter, *The Muslims of British India*, (Cambridge, 1972).
25. Hasan, Mushirul (ed), *India's Partition: Process, Strategy and Mobilization*, (Delhi, OUP, 1998).
26. Heimsath, Charles, *Indian Nationalism and Hindu Social Reform* (Mumbai, OUP, 1964).



**Four-Year Integrated B.A., B.Ed. Course**  
**3<sup>rd</sup> Semester**  
**History (Elective)**  
**HS 301: Social Formation and Cultural Pattern of the Pre-modern times**

**Credits- 4+2**  
**CH: 4 (L) +2(T)**

**Max. Marks: 100**  
**External: 80; Internal: 20**

**UNIT-I**

Evolution of Homo sapiens, Paleolithic and Mesolithic Cultures.  
Food Production: beginning of agriculture and domestication of animals  
Bronze Age Culture: i) Economy, ii) Social Stratification,  
iii) State structure in reference to Mesopotamia (upto Akkadian Empire).

**UNIT-II**

Subsistence Economy to feudal states in Europe from 7<sup>th</sup> to 15<sup>th</sup> AD Centuries,  
Origin of Feudalism and crisis of feudalism

**UNIT-III:**

Religion and culture in medieval Europe: i) Rise of Papacy, ii) monastic revival, iii) family  
Organization, iv) demographic changes

**UNIT-IV**

Rise of Islam in Central Asia–the tribal background  
The caliphate – society and state  
Religious development – the origin of Shariah, Sufism

**Suggested Readings**

1. V. I. Alexeev, The Origins of the Human Race.
2. S. Ameer Ali. The Spirit of Islam
3. J. Barraclough. The Medieval Papacy
4. J. Barraclough (ed.) The Times Atlas of World History, rev. ed. Geoffrey Parker (1994)
5. R.E.M. Balsden. The Story of Empire
6. K. C. Chang, The Archaeology of China
7. V. Gordon Childe. Man Makes Himself
8. Encyclopedia of Islam (1<sup>st</sup> ed.) 1 Vol.
9. M.I. Finley, The Ancient Greeks
10. M.I. Finley, Ancient Slavery and Modern Ideology
11. P. Garnsey and Saller. The Roman Empire
12. J. Huizinga. The Waning of the Middle Ages / Revised ed. The Autumn of The Middle Ages.
13. K. Hopkins. Conquerors and Slaves
14. M. G. S. Hodgson. The Venture of Islam
15. Rodney Hilton, Bondmen Made Free.
16. Rodney Hilton. Transition from Feudalism to Capitalism.
17. H. M. Jones. Decline of the Ancient World
18. J. Mellaart. Neolithic of the Near East
19. Joseph Needham. Science and Civilization in China Vol.I.
20. L. Oppenheim. Ancient Mesopotamia.
21. J.N. Postgate, Early Mesopotamia
22. G. W. Southern, Making of Middle Ages.
23. Paul Wheatley. Pivot of the Four Quarters

**Four-Year Integrated B.A., B.Ed. Course**  
**4<sup>th</sup> Semester**  
**History (Elective)**  
**HS 401: Making Contemporary India**

**Credits- 4+2**  
**CH: 4 (L) +2(T)**

**Max Marks: 100**  
**External: 80, Internal: 20**

**Unit- I: Towards an Independent India**

- a) Government of India Act 1935
- b) Negotiations for Independence and Popular Movements
- c) Partition

**Unit-II: Birth of the Republic and the Constituent Assembly**

- a) Drafting and working of a democratic Constitution, Integration of Princely States

**Unit-III: Indian Democracy at Work c1950- 1970s**

- a) Issue and Challenges, Language, Caste, Gender, Region

**Unit-IV: Economy Society and Culture c 1950-1970s**

- a) The Land Question, Planned Economy, Industry and Labour
- b) Cultural Trends: Literature, Mass Media

**References**

1. Granville Austin, Indian Constitution: Cornerstone of a Nation, New Edition, OUP, 2011 Francine Frankel, India's
2. Political Economy, 1947-2004, New Delhi: Oxford University Press, 2006.
3. Paul Brass, The Politics of India Since Independence, Cambridge: Cambridge University Press, 1994. Ram Chandra
4. Guha, India after Gandhi: The History of the World's Largest Democracy, New Delhi: Picador, 2007
5. Bipan Chandra, et al (ed) India after Independence, New Delhi: Penguin Books, 1999 Appadurai, Domestic Roots of India's Foreign Policy 1947-1972. New Delhi: Oxford University Press, 1979.
6. Rajni Kothari, Politics in India, New Delhi: Orient Longman, 1970.
7. Joya Chatterji, The Spoils of Partition: Bengal and India, 1947-67, Cambridge: Cambridge University Press, 2007. Sunil Khilnani, The Idea of India, Penguin Books, New Delhi, 2004 IGNOU, Democracy and Development, M.A. Pol. Science, Vol-I, II.

### Structure of History (Honours) Syllabus

SEM	Course Code	Course Name	Title of the paper	Contact hours	Credits	Marks		
						Internal	External	Total
1 <sup>st</sup> Semester	HHS 101	History I	History of India Up to C.A.D. 650	4(L)+2(T)	6	20	80	100
2 <sup>nd</sup> Semester	HHS 201	History II	History of India C.A.D 650-A.D.1550	4(L)+2(T)	6	20	80	100
3 <sup>rd</sup> Semester	HHS 301	History III	History of India C.A.D 1550-A.D. 1818	4(L)+2(T)	6	20	80	100
	HHS 302	History IV	History of India 1818 A.D. – 1947 A.D.	4(L)+2(T)	6	20	80	100
4 <sup>th</sup> Semester	HHS 401	History V	History of Post-Independent India	4(L)+2(T)	6	20	80	100
	HHS 402	History VI	Rise of The Modern West, Mid 15 <sup>th</sup> to Late 18 <sup>th</sup> Centuries	4(L)+2(T)	6	20	80	100
5 <sup>th</sup> Semester	HHS 501	History VII	Modern Europe and the World: C.1800 A.D.-1939 A.D.	4(L)+2(T)	6	20	80	100
	HHS 502	History VIII	History of Modern China	4(L)+2(T)	6	20	80	100
	HHS 503	History IX	History of East Asia-Japan (1868-1945)	4(L)+2(T)	6	20	80	100
6 <sup>th</sup> Semester	HHS 601	History X	National Liberation Movements in 20 <sup>th</sup> Century World	4(L)+2(T)	6	20	80	100
	HHS 602	History XI	History of United States of America (c.1776-1960)	4(L)+2(T)	6	20	80	100
	HHS 603	History XII	<b>Dissertation/Project</b>	4L	2	10	40	50
7 <sup>th</sup> Semester	HHS 701	History XIII	Roots of Modern World	4(L)+2(T)	6	20	80	100
	HHS 702	History XIV	Issues in Modern World	4(L)+2(T)	6	20	80	100
8 <sup>th</sup> Semester	HHS 801	History XV	History of Science and Technology in India	4(L)+2(T)	6	20	80	100
	HHS 802	History XVI	Historiography	4(L)+2(T)	6	20	80	100
			<b>Total</b>		<b>92</b>	<b>310</b>	<b>1240</b>	<b>1550</b>

**Four-Year Integrated B.A., B.Ed. Course**  
**1<sup>st</sup> Semester**  
**History (Honours) - I**  
**HHS 101: History of India UP TO C.A.D. 650**

**Credits- 4+2**  
**CH: 4 (L) +2(T)**

**Max. Marks: 100**  
**External: 80; Internal: 20**

**Unit: I: Pre History and Pro History**

- a) General background: Physiography, environment, unity in diversity, people and language.
- b) Sources: Literary and archaeological.
- c) Pre-History: Paleolithic, Mesolithic, Chalcolithic cultures – features and geographical distribution.
- d) Proto- history: Harappan civilization – origin, distribution, features, decline.

**Unit: II: Emergence of early Historic India**

- a) Aryan problem; Society, economy, polity and religion as reflected in early and later Vedic literature.
- b) Jainism, Buddhism and Ajivikas – Background and features.
- c) Rise of Janapadas and Mahajanapadas – expansion of urbanization.
- d) Iranian and Macedonian invasions – causes and impact.

**Unit: III: Mauriyan India**

- a) Rise of Magadha and Mauryan Empire – material background.
- b) Mauryan expansion and administration from Chandragupta Maurya to Asoka, economy.
- c) Asoka's Dhamma, Mauryan Art and Architecture.
- d) Decline of the Mauryan state.

**Unit: IV: Post Mauryan development up to Harshavardhana**

- a) The Kushanas – Kanishka, their economy and culture; Satavahanas – Gautamiputra Satkarni.
- b) Sangam Age: Society, language and literature.
- c) Administrative, economy and cultural life in the Gupta Age.
- d) Harshavardhana: Emergency and estimate; beginning of feudalism.

**Recommended Readings:-**

1. R.C. Majumder, et.Al.: An Advanced History of India (Macmillan)
2. R.C. Majumdar: Ancient India (Motilal Banarasi Das)
3. Vincent Smith: Oxford History of India (OUP)
4. Romila Thapar: Early India (Penguin)
5. D.N. Jha: Early India: A concise History (Manohar)
6. R.S. Sharma: India's Ancient past (OUP)
7. A.L. Basham: The Wonder that was India (Rupa)
8. Upinder Singh: A History of Ancient and Early Medieval India (Pearson)
9. Ranbir Chakraborty: Exploring Early India (Macmillan)
10. Allchin & Allchin : The Rise of civilization in India and Pakistan (Cambridge India Foundation Book)

**Four-Year Integrated B.A., B.Ed. Course**  
**2<sup>nd</sup> Semester**  
**History (Honours)- II**  
**HHS 201: History of India C.A.D 650-A.D 1550**

**Credits- 4+2**  
**CH: 4 (L) +2(T)**

**Max. Marks: 100**  
**External: 80; Internal: 20**

**Unit: I c.A.D 650-1200 AD (I)**

- a) Sources: early mediaeval and Sultanate Period: epigraphy, numismatics and literature.
- b) Arab invasion: causes and impact.
- c) Regional polities Pala's& Cholas.
- d) Tripartite struggle.

**Unit –II c.A.D. 650-c.1200AD (II)**

- a) Economy: land grants and agrarian expansion; feudal relations.
- b) Economy: Urban centers, trade and commerce.
- c) Rise and growth of regional languages with special reference to Bengali, Tamil & Marathi.
- d) Socio –Cultural development: Shankara& Bhakti philosophy; transformation of Buddhism influences of Tantric practices, art& architecture of the pallavas& the Cholas.

**Unit-III c.1200-c.1550 A.D (I)**

- a) Establishment & Consolidation of Delhi Sultanate: Iltutmish, Razia, Balban- Role & Assessment.
- b) Alauddin Khalji, Muhammed bin Tughluq, Firoze Tughluq- Reforms, foreign policies, assessment.
- c) Central, provincial and military organization under the Delhi Sultanate; idea of kingship- Balban & Alauddin Khalji.
- d) Timur's invasion and the decline of Delhi Sultanate.

**Unit –IV c. 1200-c.1550 A.D (II)**

- a) Rise of Provincial Kingdoms- Bahmani and Vijaynagar.
- b) Bhakti and Sufi Movements-origin, Features & Impact.
- c) Art & Architecture of the Sultanate period.
- d) Economy of the Delhi Sultanate: Agriculture & Revenue system, Urbanisation; trade & commerce.

**Recommended reading:**

1. R.C. Majumder, et.Al.: An Advanced History of India (Macmillan)
2. R.C. Majumdar: Ancient India (Motilal Banarasidass)
3. D.N.Jha : Early India : A Concise History (Manohar)
4. A.L.Basham : The wonder that was India, Vol-I (Rupa)
5. S.A.A.Rizvi: The wonder that was India, Vol-II(Rupa)
6. Upindar Singh : A History of Ancient and Early Medieval India (Person)
7. Satish Chandra: Medieval India, From sultanat to the Mughals, Part-I( Har Anand)
8. Satish Chandra: History of Medieval India( Orient Black swan)
9. K.A.Nilkanta Shastri: A History of South India(Oup)
10. RanabirChakravarti: Exploring Early India upto A.D.1300(Macmillan)
11. R.S.Sharma: Indian Fudalism (Macmillan)
12. Vipul Singh: Interpreting Medieval India, Vol: I (Macmillan)

**Four-Year Integrated B.A., B.Ed. Course**  
**3<sup>rd</sup> Semester**  
**History (Honours)-III**  
**HHS 301: History of India C.A.D 1550-A.D 1818**

**Credits- 4+2**  
**CH: 4 (L) +2(T)**

**Max. Marks: 100**  
**External: 80;**  
**Internal: 20**

**Unit I**

- a) Sources and historiography of Mughal history
- b) Mughal -Afghan contest for Supremacy
- c) Sher Shah's administrative reform
- d) Establishment of Mughal rules: Babur and Humayun

**Unit II**

- a) Religious and Rajput policies of Mughals: from Akbar to Aurangzeb
- b) Administration under the Mughals: from Akbar to Aurangzeb
- c) Revenue Reforms under the Mughals: from Akbar to Aurangzeb
- d) Central Asian and Deccan policy of the Mughals : from Akbar to Aurangzeb

**Unit III**

- a) Art and architecture under the Mughals
- b) Music, literature and Society under the Mughals
- c) Religious development: Sufi and bhakti traditions, Sikkim
- d) Decline of Mughal power: major debates

**Unit IV**

- a) Colonial list and National list perceptions 18 century India
- b) Expansion and consolidation of British power (1740-1818 military expansions and commercial interests)
- c) British administration in India: Clive, Warren Hastings, Cornwallis, Wellesley
- d) Impact of colonial policies: Bengal famine of 1770; Sannyasi and Fakir Uprisings

**Recommended readings**

1. R.C. Majumdar, et al.,: An Advance History of India(Macmillan)
2. Satish Chandra: Medieval India, part-II: Mughal Empire(Har Anand Publications)
3. Satish Chandra: Medieval India(Orient Black Swan)
4. S.A.A. Rizvi: the wonder that was India Vol: II (Rupa)
5. John F. Richards: The Mughal Empire(Cambridge: Foundation Books)
6. Stewart Gordon: The Marathas(Cambridge: Foundations Books)
7. J.S Grewal: The Sikhs(Cambridge: Foundation Books)
8. Bipan Chandra: Modern India( Orient Black swan)
9. Vincent Smith: Oxford History Of India(OUP)
10. Sekhar Bandyopadhyay : From Plassey to Partition: A History of Modern India(Orient Blackswan)

**Four-Year Integrated B.A., B.Ed. Course**  
**3<sup>rd</sup> Semester**  
**History (Honours) -IV**  
**HHS 302: History of India C.A.D 1818-A.D 1947 A.D**

**Credits- 4+2**  
**CH: 4 (L) +2(T)**

**Max. Marks: 100**  
**External: 80; Internal:20**

**Unit I colonial polity and popular resistance**

- a) Expansion and consolidation of British power in India (1818-1856); Charter Acts of 1813 and 1833.
- b) Ideology of expansion-Mercantilism, Orientalism.
- c) Popular resistance to Colonial rule: i) Santhal-causes, nature and impact; ii) Revolt of 1857-causes, nature, impact and historiography.
- d) Major constitutional reforms since 1909 to 1935.

**Unit II Colonial Society and Economy**

- a) Spread of Western education, growth of press; Debate on 19 century “Bengal Renaissance”
- b) Socio - religious Reform movements Young Bengal, Ram Mohan Roy, Arya Semaj, Vidyasagar, Vivekananda and Shri Syed Ahmed Khan.
- c) Agriculture and land revenue settlement: Ryotwari, mahalwari and commercialization of Agriculture.
- d) Drain of wealth and Deindustrialization of traditional industries; emergence of modern industries and transportation facilities-cotton, steel and Railways.

**Unit III National Movement (I)**

- a) Formation of Indian National Congress-background; Moderates and extremists-their activities.
- b) Partition of Bengal and Swadeshi movement; Revolutionaries and their activities: Bengal, Punjab and Maharashtra.
- c) Gandhian movements: Non-Cooperation, civil disobedience, Quit India Movements; women's participation
- d) Subhash Chandra Bose and his role; INA, RIN Munity

**Unit IV National movement (II)**

- a) Rise of left wing and their role; Telengana Uprising
- b) Depressed caste movements: Phule and Ambedkar
- c) growth of communalism: Muslim League and demand for Pakistan
- d) Circumstances leading to the partition of India : Cripps Mission to Mountbatten plan

**Recommended Readings:**

1. R.C. Majumdar, et al., an Advanced History of India (Macmillan)
2. Bipan Chandra: Modern India (Orient Black swan)
3. Bipan Chandra et al.; India's Struggle for Independence (Penguin)
4. Bipan Chandra, Barun De and Amlesh Tripathi: Freedom Struggle (NBT)

5. Percival Spear: Oxford History of Modern India(OUP)
6. Sekhar Bandyopadhyay: From Plassey to Partition: A History of Modern India (Orient Blackswan)
7. Sumit Sarkar: Modern India( Macmillan)
8. Tirthankar Roy: The Economic History of India1857-1947(OUP)
9. Suranjan Chatterjee and Siddhartha GuhaRay: History of Modern India(Progressive Publishers)
10. Barbara D. Metcalf and Thomas R. Metcalf: A Concise History of India (Cambridge India)

**Four-Year Integrated B.A., B.Ed. Course**  
**4<sup>th</sup> Semester**  
**History (Honours) -V**  
**HHS 401: History of Post-Independent India**

**Credits- 4+2**  
**CH: 4 (L) +2(T)**

**Max. Marks: 100**  
**External: 80; Internal:20**

**COURSE CONTENT:**

**Unit I: Making of the Constitution:**

- a) Basic Features - Institutions -Working of the Constitution

**Unit II: The Initial Years:**

- a) Consolidation - Linguistic Reorganization - Building a secular nation

**Unit III: Consolidating the Nation:**

- a) Political Parties - Foreign Policy – Economy

**Unit IV: Test of Democracy:**

- a)Social reforms in South: Narayana Guru, Periyar, Gora and HemalataLavanam Peasant Movements  
 Workers Movements Tribal Unrest Emergency Years Dalit movements Women’s movements

**References:**

1. Hunashall, S.M., The Lingayat Movement-A Social revolution in Karnataka, Dharwar, 1947.
2. Sughata, Bose and Ayesha Jalal, Modern South Asia (History, culture and Political Economy), Oxford University Press, Delhi. 1999.
3. Baily, C.A., Origins of Nationality in South Asia, Oxford, Delhi. 1998.
4. Peter Heehs, Nationalism, Terrorism and Communalism, Oxford University Press, Delhi. 1998.
5. Sharma R.R. (Ed.), the USSR in Transition: Issues and Themes, New Delhi. 1995.
6. David Taylor and Malcoim (Ed.), Political Identity in South Asia, Centre of South Asian Studies, London, 1978.
7. GovindKelkar, China after Mao, Usha Publishers, New Delhi.
8. Hall, D.G.E., History of South-East Asia, MacMillan Education Limited, Hampshire,1995.
9. Arjun Dev, Contemporary World, NCERT, New Delhi.
10. Urmila Phadnis, Towards Integration of Indian States, New Delhi. 1988.
11. Peter Heehs, Modern India and the World, Oxford University Press, New Delhi.



**Four-Year Integrated B.A., B.Ed. Course**  
**4<sup>th</sup> Semester**  
**History (Honours) -VI**  
**HHS 402: Rise of the Modern West, Mid 15<sup>th</sup> to late 18<sup>th</sup> centuries**

**Credits- 4+2**  
**CH: 4 (L) +2(T)**

**Max. Marks: 100**  
**External: 80; Internal: 20**

**Unit I**

- a) Crisis and decline of feudalism in Western Europe and forms of survival in Eastern Europe.
- b) Rise of absolute monarchies in England, France and Spain: reasons
- c) Thirty Years' war and Treaty of Westphalia-causes and significance.
- d) Economic origin of modern western society: Mercantilism, Commercial Revolution

**Unit II**

- a) Renaissance: Meaning, causes, nature, spread, limitations; growth of Humanism.
- b) Reformation: origin, varieties, significance; Counter Reformation
- c) Modern Science and Technology: Leonardo Da Vinci, Copernicus, Galileo and Newton: their contribution; Printing Revolution- impact
- d) Geographical Exploration: Motive and early voyage and beginnings of colonialism with special reference to Spain, Portugal and England.

**Unit III**

- a) Price Revolution: causes, nature and impact; Enclosure Movement
- b) Industrial revolution in England: background and features.
- c) Challenge to colonialism: American war of Independence- cause and significance.
- d) Debate on transition from feudalism to capitalism: Dobb-Sweezy debate.

**Unit IV**

- a) Political pattern-I :conflict between parliament and crown in England in the 17<sup>th</sup> century: Long parliament and civil war; Glorious Revolution of 1688, growth of liberalism
- b) Political patterns-II: Royal Absolutism in France, Louis XIV and his policies.
- c) Eighteenth century as Age of Enlightenment: Features and impact on society and Polity
- d) French Revolution: background, nature, and impact.

**Recommended Readings:**

1. MeenakshiPhukon: Rise of the Modern West
2. Aravind Sinha: Europe in Transformed
3. Rila Mukherjee: Europe Transformed

4. L. Mukherjee: History of Europe(1453-1815)
5. B.V.Rao: History of Europe(1453-1815)
6. C.J.H. Hayes: Modern Europe to 187

## Structure of Political Science (Honours) Syllabus

SEM	Course Code	Course Name	Title of the paper	Contact hours	Credits	Marks		
						Internal	External	Total
1 <sup>st</sup> Semester	HPS 101	Political Science I	Political Theory	4(L)+2(T)	6	20	80	100
2 <sup>nd</sup> Semester	HPS 201	Political Science II	Constitutional Government and Democracy in India	4(L)+2(T)	6	20	80	100
3 <sup>rd</sup> Semester	HPS 301	Political Science III	Political Process in India	4(L)+2(T)	6	20	80	100
	HPS 302	Political Science IV	Perspectives on Public Administration	4(L)+2(T)	6	20	80	100
4 <sup>th</sup> Semester	HPS 401	Political Science V	Indian Political Thought	4(L)+2(T)	6	20	80	100
	HPS 402	Political Science VI	Public Policy and Administration in India	4(L)+2(T)	6	20	80	100
5 <sup>th</sup> Semester	HPS 501	Political Science VII	Western Political Thought	4(L)+2(T)	6	20	80	100
	HPS 502	Political Science VIII	Global Politics	4(L)+2(T)	6	20	80	100
	HPS 503	Political Science IX	Classical Political Philosophy	4(L)+2(T)	6	20	80	100
6 <sup>th</sup> Semester	HPS 601	Political Science X	Modern Political Philosophy	4(L)+2(T)	6	20	80	100
	HPS 602	Political Science XI	Public Opinion and Survey Research	4(L)+2(T)	6	20	80	100
	HPS 603	Political Science XII	Dissertation/Project	4(L)	2	10	40	50
7 <sup>th</sup> Semester	HPS 701	Political Science XIII	Indian Government and Politics	4(L)+2(T)	6	20	80	100
	HPS 702	Political Science XIV	Panchayati Raj Institutions in India	4(L)+2(T)	6	20	80	100
8 <sup>th</sup> Semester	HPS 801	Political Science XV	Indian Constitution and Human Rights	4(L)+2(T)	6	20	80	100
	HPS 802	Political Science XVI	Legislative Support	4(L)+2(T)	6	20	80	100
			<b>Total</b>		<b>92</b>	<b>310</b>	<b>1240</b>	<b>1550</b>

**Four-Year Integrated B.A., B.Ed. Course**  
**1<sup>st</sup> Semester**  
**Political Science (Honours) -I**  
**HPS 101: Political theory**

**Credits- 4+2**  
**CH: 4 (L) +2(T)**

**Max. Marks: 100**  
**External: 80; Internal: 20**

**COURSE CONTENT**

**Unit- I**

- a. Meaning of politics and political Theory: Present state of Political Theory: Empirical Systems Analysis, Structural – Functionalism, Liberal.
- b. Different approaches to the study of Politics: Normative, Behavioural and Post Behavioural Marxist Approach.
- c. Feminist Views of Politics.
- d. Theories of State (Origin, Nature and Functions), Idealist, Liberal, Neo-liberal, Marxist and Gandhian.

**Unit-II**

- a. Concept of State Sovereignty: Monistic, Pluralistic and Popular: Changing Concept of Sovereignty in the context of Globalisation.
- b. Democratic Theories: David Held's classification.
- c. Liberty, Equality, Rights and Law – Concept and their Interrelationship.
- d. Justice: Theories of Rawls, Distributive Justice; Multiculturalism and Social Justice.

**Unit-III**

- a. Dialectical Materialism and Historical Materialism – Concept of class and class Struggle –Theory of Surplus Value.
- b. Rise and development of Capitalism and its contradictions.
- c. Gandhian concept of Sarvodaya and Satyagraha.

**Unit-IV**

- a. Theories of Social change – Fabian theory of Evolution – Marxian theory of Revolution ; Socialist and Non – Socialist Revolution – violence and Revolution.
- b. Theories of Change: Lenin, Mao and Gandhi.

**Four-Year Integrated B.A., B.Ed. Course**  
**2<sup>nd</sup> Semester**

**Political Science (Honours) -II**

**HPS 201: Constitutional Government and Democracy in India**

**Credits- 4+2**

**CH: 4 (L) +2(T)**

**Max. Marks: 100**

**External: 80; Internal: 20**

**COURSE CONTENT:**

**UNIT-I: Sources and Features of Indian Constitution**

6. a) The making of Indian Constitution and its Sources
7. b) Basic features of Indian Constitution

**UNIT-II: Rights, Duties and DPSP**

8. a) Fundamental rights and Duties,
9. b) Directive principle of state policy

**UNIT-III: Union Government and its function**

10. a) Union Government : President, Prime Minister
11. b) Parliament, Composition & functions

**UNIT-IV: Judicial System**

12. a) Supreme Court : Composition and functions
13. b) Judicial Review and Judicial Activism

**References**

- 1) G. Austin, : The Indian Constitution : Corner stone of a Nation
- 2) Rajani Kothari : Politics in India
- 3) K. R. Bombwal : National Power & State Autonomy
- 4) J. C. Johari : Indian Government and Politics
- 5) D. D. Basu : Introduction to the Constitution of India
- 6) M.V. Pylee : Constitutional Government in India
- 7) D. C. Gupta : Indian Government and Politics

- 8) C.P. Bhambri : Politics in India
- 9) K. V. Rao : Parliamentary Democracy in India
- 10) S. L. Sikri : Indian Government and Politics

**Four-Year Integrated B.A., B.Ed. Course**  
**3<sup>rd</sup> Semester**  
**Political Science (Honours) -III**  
**HPS 301: Political Process in India**

**Credits- 4+2**  
**CH: 4 (L) +2(T)**

**Max. Marks: 100**  
**External: 80; Internal: 20**

**COURSE CONTENT:**

**Unit-I: Political parties and Party system**

- 14. a) Party system : Features, Trends
- 15. b) Electoral Process, Electoral Reforms

**Unit-II: Determinants of voting Behavior**

- 16. a) Caste and Politics
- 17. b) Religion and Politics

**Unit-III: Regionalism in Indian Politics**

- 18. a) Regional political parties
- 19. b) The politics of Secession and Accommodation

**Unit-IV: Affirmative Action policies**

- 20. a) Women
- 21. b) Caste and Class

**Suggested Readings**

**I. Political Parties and the Party System:**

Trends in the Party System; From the Congress System to Multi-Party Coalitions

R. Kothari, (2002) 'The Congress System', in Z. Hasan (ed.) Parties and Party Politics in India, New Delhi: Oxford University Press, pp 39-55.

E. Sridharan, (2012) 'Introduction: Theorizing Democratic Consolidation, Parties and Coalitions', in Coalition Politics

and Democratic Consolidation in Asia, New Delhi: Oxford University Press.

Y. Yadav and S. Palshikar, (2006) 'Party System and Electoral Politics in the Indian

States, 1952-2002: From Hegemony to Convergence', in P. deSouza and E. Sridharan (eds.) India's Political Parties,

New Delhi: Sage Publications, pp. 73-115.

Y. Yadav, (2000) 'Understanding the Second Democratic Upsurge', in F. Frankel, Z. Hasan, and R. Bhargava (eds.) Transforming India: Social and Political Dynamics in Democracy, New Delhi: Oxford

University Press, pp. 120-145. S. Kumar, (2009) 'Religious Practices Among Indian Hindus,' Japanese Journal of Political Science, Vol. 10, No. 3, pp. 313-332.

**Regional Aspirations: The Politics of Secession and Accommodation**

M. Chadda, (2010) 'Integration through Internal Reorganisation', in S. Baruah (ed.) Ethnonationalism in India: A Reader, New Delhi: Oxford University Press, pp. 379-402.

P. Brass, (1999) 'Crisis of National Unity: Punjab, the Northeast and Kashmir', in the Politics of India Since Independence, New Delhi: Cambridge University Press and Foundation Books, pp.192-227.

**IV. Affirmative Action Policies: Women, Caste and Class**

M. Galanter, (2002) 'The Long Half-Life of Reservations', in Z. Hasan, E. Sridharan and R. Sudarshan (eds.) India's Living Constitution: Ideas, Practices, Controversies, New Delhi: Permanent Black, pp. 306-318.

M. John, (2011) 'The Politics of Quotas and the Women's Reservation Bill in India', in M. Tsujimura and J. Steele (eds.) Gender Equality in Asia, Japan: Tohoku University Press, pp. 169-195



**Four-Year Integrated B.A., B.Ed. Course**  
**3<sup>rd</sup> Semester**  
**Political Science (Honours) -IV**  
**HPS 302: Perspective on Public Administration**

**Credits- 4+2**

**CH: 4 (L) +2(T)**

**Max. Marks: 100**

**External: 80; Internal: 20**

**COURSE CONTENT:**

**Unit-I: Public Administration as a Discipline**

- 22. a) Meaning, Scope and Significance of the Discipline
- 23. b) Public and private Administration

**Unit-II: Classical Theories**

- 24. a) Scientific Management (F.W. Taylor)
- 25. b) Ideal – Type bureaucracy (Maxweber)

**Unit-III: Neo-Classical Theories**

- 26. a) Human relation theory (Elton Mayo)
- 27. b) Rational decision-making (Herbert Simon)

**Unit-IV: Contemporary Theories**

- 28. a) Ecological approach (Fred rigs)
- 29. b) Innovation and Entrepreneurship (Peter Drucker)

30.

**Essential Reading**

- 1) A. Avasthi& S. R. Maheswari : Public Administration
- 2) C. P. Bhambri : Public Administration
- 3) Nigro F.A. and G.I. Nigro : Modern Public Administration
- 4) Mohit Bhattacharya : Public Administration
- 5) RumkiBasu : Public Administration
- 6) M. P. Sharma : Public Administration in theory & practice

7) A. R. Tyagi : Public Administration

8) Ashok Chanda : Indian Administration

**Four-Year Integrated B.A., B.Ed. Course**  
**4<sup>th</sup> Semester**  
**Political Science (Honours) -V**  
**HPS 401: Indian Political Thought**

**Credits- 4+2**  
**CH: 4 (L) +2(T)**

**Max. Marks: 100**  
**External: 80; Internal: 20**

**COURSE CONTENT:**

**UNIT-I**

31. a) Raja Ram Mohan Roy : Rights
32. b) Vivekananda : Ideal Society

**UNIT-II**

33. a) Mahatma Gandhi : Swaraj

34. b) R. N. Tagore : Critic of Nationalism

### **UNIT-III**

35. a) Subas Chandra Bose : Political goals, political techniques

36. b) Jawaharlal Neheru : Secularism

### **UNIT-IV**

37. a) B. R. Ambedkar : Social Justice

38. b) R. M. Lohia : Socialism

### **References**

- |                      |   |   |
|----------------------|---|---|
| V. P. Verma          | : | Modern Indian Political Thought         |
| Kiran Saxena         | : | Modern Indian Political Thought         |
| V. R. Mehta          | : | Foundations of Indian Political Thought |
| K. P. Karunakaran    | : | Modern Indian Political Tradition       |
| G. C. Nayak          | : | Indian Political Traditions             |
| R. C. Gupta          | : | Indian Political Thought                |
| B. C. Rout           | : | Indian Political Tradition              |
| J. K. Misra (edited) | : | Indian Political Thinkers               |
| S. Ghosh             | : | Modern Indian Political Thought         |

**Four-Year Integrated B.A., B.Ed. Course**

**4<sup>th</sup> Semester**

**Political Science (Honours) -VI**

**HPS 402: Public Policy and Administration in India**

**Credits- 4+2  
CH: 4 (L) +2(T)**

**Max. Marks: 100  
External: 80; Internal: 20**

**COURSE CONTENT:**

**Unit- I Public Policy**

- 39. a) Public Policy :Characteristics and models
- 40. b) Public Policy process in India

**Unit – II - Decentralization**

- 41. a) Meaning, Significance and types
- 42. b) Local self-Governance: Rural and Urban

**Unit – III-Citizens and Administration Interface**

- a) Redressal of Public grievances
- 43. b) RTI, Lokpal and E Governance

**Unit – IV -Social Welfare Policies**

- (a) Education : Right to Education
- (b) Health : National Health Mission
- (c) Food : Right to Food Security
- (d) Employment : MGNREGA

## Recommended Books

- 1) A. Avasthi & S. R. Maheswari : Public Administration
- 2) C. P. Bhambri : Public Administration
- 3) Nigro F.A. and G.I. Nigro : Modern Public Administration
- 4) Mohit Bhattacharya : Public Administration
- 5) Rumki Basu : Public Administration
  
- 6) M. P. Sharma : Public Administration in theory & practice
- 7) A. R. Tyagi : Public Administration
- 8) Ashok Chanda : Indian Administration

### Four-Year Integrated B.A.B.Ed Course

#### Political Science elective Paper Syllabus:

SEM.	Course Code	Course Name	Title of the paper	Contact hours	Credits	Marks		
						Internal	External	Total
1 <sup>st</sup> Semester	PS 101	Political Science	Understanding Political Theory	4(L)+2(T)	6	20	80	100
2 <sup>nd</sup> Semester	PS 201	Political Science	Political Theory Concepts and Debates	4(L)+2(T)	6	20	80	100
3 <sup>rd</sup> Semester	PS 301	Political Science	Introduction to Comparative Government and Politics	4(L)+2(T)	6	20	80	100
4 <sup>th</sup> Semester	PS 401	Political Science	Perspective on International Relation and World History	4(L)+2(T)	6	20	80	100

**Four-Year Integrated B.A., B.Ed. Course**  
**1<sup>st</sup> Semester**  
**Political Science (Elective)**  
**HPS 101: Understanding Political Theory**

**Credits- 4+2**

**CH: 4 (L) +2(T)**

**Max. Marks: 100**

**External: 80; Internal: 20**

**Unit-I: Nature, scope and approaches of political theory**

- 44. Nature, scope and significance of political theory
- 45. Approaches to political theory : Normative, Historical and Empirical

**Unit-II: Traditions of Political Theory**

- 46. Liberal, Marxist
- 47. Anarchist, Conservative

**Unit-III: Critical and contemporary prospective in Political Theory**

- 48. Feminist
- 49. Post-modern

**Unit-IV: Democracy**

- 50. Democracy, The History of an idea
- 51. Procedural Democracy & Deliberative Democracy

**Recommended Books**

- |                             |   |   |
|-----------------------------|---|---|
| 1)E. Asirvatham& K.K. Misra | : | Political theory                          |
| 2)S.P. Verma                | : | Modern political theory                   |
| 3)E. Barker                 | : | Principles of social and political theory |
| 4)F. Thakurdas              | : | Essays on political theory                |
| 5)R. L. Gupta               | : | Political theory                          |
| 6)M.P. Jain                 | : | Political theory                          |
| 7)O.P Gauba                 | : | An Introduction to Political theory       |
| 8)Harold J. Laski           | : | A Grammar of Politics                     |

**Four-Year Integrated B.A., B.Ed. Course**  
**2<sup>nd</sup> Semester**

**Political Science (Elective)**

**HPS 201: Political Theory, Concepts and Debates.**

**Credits- 4+2**

**CH: 4 (L) +2(T)**

**Max. Marks: 100**

**External: 80; Internal: 20**

**Unit-I: Importance of Freedom**

Negative freedom: Liberty

Positive Freedom: Freedom as Emancipation and Development

**Unit-II: Significance of Equality**

Formal Equality: Equality of Opportunity, Political Equality

Egalitarianism: Background, Affirmative action

**Unit-III: Indispensability of Justice**

Procedural Justice, Distributive Justice

Global Justice

**Unit-IV: The Universality of Rights**

Natural Rights, Moral and Legal Rights

Human rights-Evolution and Content.

**References**

- |                              |   |   |
|------------------------------|---|---|
| 1) E. Asirvatham& K.K. Misra | : | Political theory                          |
| 2) S.P. Verma                | : | Modern political theory                   |
| 3) E. Barker                 | : | Principles of social and political theory |
| 4) F. Thakurdas              | : | Essays on political theory                |
| 5) R. L. Gupta               | : | Political theory                          |
| 6) M.P. Jain                 | : | Political theory                          |
| 7) O.P Gauba                 | : | An Introduction to Political theory       |
| 8) Harold J. Laski           | : | A Grammar of Politics                     |



**Four-Year Integrated B.A., B.Ed. Course**  
**3<sup>rd</sup> Semester**  
**Political Science (Elective)**  
**HPS 301: Introduction to comparative Government and Politics**

**Credits- 4+2**

**CH: 4 (L) +2(T)**

**Max. Marks: 100**

**External: 80; Internal: 20**

**Unit-I-**

Nature and Scope  
Traditional and Modern approaches

**Unit-II-**

Capitalism: Meaning and Development, Globalization  
Socialism: Meaning, Growth and Development

**Unit-III - Themes for Comparative Analysis**

Colonialism: Meaning, Context, Form of Colonialism  
Decolonization, anti-colonialism, process of decolonization

**Unit-IV - Comparative Government and Politics**

U.K. Monarchy, Cabinet, Parliament  
U.S.A. President, Congress, Supreme Court.

**Suggested Readings**

- |                                  |   |   |
|----------------------------------|---|---|
| 1) D. C. Bhattacharya            | : | Modern Political Constitutions            |
| 2) B. C. Rout                    | : | Major Political Systems                   |
| 3) K. R. Bambwal                 | : | Major Contemporary Constitutional Systems |
| 4) A. C. Kapoor & K.K. Mishra    | : | Select Constitutions                      |
| 5) J. C. Johari                  | : | Major Modern Political Systems            |
| 6) Vishnoo Bhagwan and V. Bhusan | : | World Constitutions                       |
| 7) C. Rossiter                   | : | Parties and Politics in America           |
| 8) J. Derbyshire                 | : | Politics in China                         |
| 9) J. Derbyshire                 | : | Political systems of the world            |
| 10) K. C. Wheare                 | : | Federal Government                        |
| 11) Goyal                        | : | Comparative Government                    |
| 12) H. Finer                     | : | Theory & practice of Modern Government    |

**Four-Year Integrated B.A., B.Ed. Course**  
**4<sup>th</sup> Semester**

**Political Science (Elective)**

**HPS 401: Perspective on International Relation and World History**

**Credits- 4+2**

**CH: 4 (L) +2(T)**

**Max. Marks: 100**

**External: 80; Internal: 20**

**Unit-I**

The concept and Development of international relations  
History and IR : Emergence of the international state system

**Unit-II**

Classical realism and Neo realism  
Liberalism and Neoliberalism

**Unit-III**

Marxist Approaches  
Feminist perspectives

**Unit-IV**

Cold War : Different phases  
Collapse of the USSR and the end of the Cold War

**Essential Readings**

1. M. Nicholson (2002) International Relations
2. Palmer & Perkins: International relations
3. K. Mingst (2011) essentials of international
4. H. Morgenthaw (2007) relation sex priorities of political relation
5. H. Bullu (2000) the balance of power
6. S. Hibden and international order
7. Theories of international relations in J. Boylis and S. Smith (eds)
8. A. Chatterjee, 'International Relations Today: Concepts And Applications', (2010), PEARSON, New Delhi Scott Burchill and others, 'Theories of International Relations,' (2001), Palgrave, New York.
9. M. Nicholson, (2002) International Relations: A Concise Introduction, New York: Palgrave, pp. 1-4.
10. R. Jackson and G. Sorensen, (2007) Introduction to International Relations: Theories and Approaches, 3rd Edition, Oxford: Oxford University Press, pp. 2-7
11. C. Brown and K. Ainley, (2009) Understanding International Relations, Basingstoke: Palgrave, pp. 1-16.
12. J. Baylis and S. Smith (eds), (2008) The Globalization of World Politics: An Introduction to International Relations, New York: Oxford University Press, pp. 1-6.
13. Rumki Basu, (ed) (2012) International Politics: Concepts, Theories and Issues. Sage, New Delhi
14. P. Viotti and M. Kauppi, (2007) International Relations and World Politics: Security, Economy, Identity, Pearson Education, pp. 40-85.
15. J. Baylis, S. Smith and P. Owens, (2008) the Globalization of World Politics: An Introduction to International Relations, New York: Oxford University Press, pp. 36-89.
16. B. Buzan, (1995) 'The Level of Analysis Problem in International Relations Reconsidered,' in K. Booth and S. Smith, (eds), International Relations Theory Today, Pennsylvania: The Pennsylvania State University Press, pp. 198-216.

## Structure of English (Honours) Syllabus

SEM	Course Code	Course Name	Title of the paper	Contact hours	Credits	Marks		
						Internal	External	Total
<b>1<sup>st</sup> Semester</b>	<b>HEG 101</b>	<b>English I</b>	Introduction to English Literature & Rhetoric	4(L)+2(T)	6	20	80	100
<b>2<sup>nd</sup> Semester</b>	<b>HEG 201</b>	<b>English II</b>	English Poetry	4(L)+2(T)	6	20	80	100
<b>3<sup>rd</sup> Semester</b>	<b>HEG 301</b>	<b>English III</b>	English Drama from Beginning to Shakespeare	4(L)+2(T)	6	20	80	100
	<b>HEG 302</b>	<b>English IV</b>	English Novel, Short-Stories and Essays	4(L)+2(T)	6	20	80	100
<b>4<sup>th</sup> Semester</b>	<b>HEG 401</b>	<b>English V</b>	Drama: Seventeenth to Twentieth Century	4(L)+2(T)	6	20	80	100
	<b>HEG 402</b>	<b>English VI</b>	Fiction: Victorian and Modern	4(L)+2(T)	6	20	80	100
<b>5<sup>th</sup> Semester</b>	<b>HEG 501</b>	<b>English VII</b>	American Literature	4(L)+2(T)	6	20	80	100
	<b>HEG 502</b>	<b>English VIII</b>	World Literature	4(L)+2(T)	6	20	80	100
	<b>HEG 503</b>	<b>English IX</b>	Socio Linguistics and Language Acquisition	4(L)+2(T)	6	20	80	100
<b>6<sup>th</sup> Semester</b>	<b>HEG 601</b>	<b>English X</b>	Indian Writing in English	4(L)+2(T)	6	20	80	100
	<b>HEG 602</b>	<b>English XI</b>	Indian Classical Literature	4(L)+2(T)	6	20	80	100
	<b>HEG 603</b>	<b>English XII</b>	Project/ Dissertation	4	2	10	40	50
<b>7<sup>th</sup> Semester</b>	<b>HEG 701</b>	<b>English XIII</b>	European Classical Literature	4(L)+2(T)	6	20	80	100
	<b>HEG 702</b>	<b>English XIV</b>	Popular Literature	4(L)+2(T)	6	20	80	100
<b>8<sup>th</sup> Semester</b>	<b>HEG 801</b>	<b>English XV</b>	Literary Criticism	4(L)+2(T)	6	20	80	100
	<b>HEG 802</b>	<b>English XVI</b>	Contemporary Literary Theory	4(L)+2(T)	6	20	80	100
			<b>Total</b>		<b>92</b>	<b>310</b>	<b>1240</b>	<b>1550</b>

# Four-Year Integrated B.A., B.Ed Course

1<sup>st</sup> Semester

## English (Honours) -I

### HEG 101: Introduction to English Literature & Rhetoric

Credits- 4+2

CH: 4 (L) +2(T)

#### Course Content

Max. Marks: 100

External : 80; Internal: 20

#### UNIT- I.

The Renaissance and the Neoclassical Period

#### UNIT- II.

The Romantic and the Victorian Period

#### UNIT-III.

The Modern Period

#### UNIT-IV.

Figures of Speech: Simile, Metaphor, Metonymy, Synecdoche, Allegory, Transferred Epithet, Anti-thesis, Oxymoron, Climax, Anti-climax, Personification, Apostrophe, Invocation, Hyperbole, Pathetic fallacy, Irony, Sarcasm, Litotes, Alliteration, Pun, Onomatopoeia.

#### Reference

- |   |                |
|---|----------------|
| <input type="checkbox"/> A Short History of English Literature: | Emile Legouis  |
| <input type="checkbox"/> History of English Literature:         | Edward Albert. |
| <input type="checkbox"/> A Short History of English Literature: | Harry Blamires |
| <input type="checkbox"/> A social history of England :          | G.M. Trevelyan |
| <input type="checkbox"/> A short history of English Literature: | Harry Blamires |
| <input type="checkbox"/> Modern Critical Terms:                 | Roger Fowler   |

**Four-Year Integrated B.A., B.Ed Course**  
**2<sup>nd</sup> Semester**

**English (Honours) –II**

**HEG 201: English Poetry**

**Credits- 4+2**  
**CH: 4 (L) +2(T)**

**Max. Marks: 100**  
**External : 80; Internal: 20**

**Course Content**

**UNIT -I**

- (a) Elizabethan Poetry, Metaphysical Poetry, Pre-Raphaelite Poetry, War Poetry  
(b) Epic, Sonnet, Lyric, Ballad, Ode, Elegy, Pastoral, Dramatic monologue, Satire

**UNIT -II**

- |                        |   |  |
|------------------------|---|--|
| 1. William Shakespeare | - | Shall I compare thee to a summer's day   |
| 2. Philip Sydney       | - | Loving in Truth                          |
| 3. Edmund Spenser      | - | One day I wrote her name upon the strand |
| 4. John Donne          | - | The Good Morrow                          |
| 5. Andrew Marvell      | - | To his coy mistress                      |

**UNIT -III**

- |                          |   |                                   |
|--------------------------|---|-----------------------------------|
| 1. William Wordsworth    | - | Ode on Intimations of Immortality |
| 2. S. T. Coleridge       | - | Kubla Khan                        |
| 3. John Keats            | - | Ode to a Nightingale              |
| 4. Lord Alfred Tennyson- |   | Ulysses                           |
| 5. Robert Browning       | - | My Last Duchess                   |

**UNIT -IV**

- |                 |   |  |
|-----------------|---|--|
| 1. W. B. Yeats  | - | The Second Coming  |
| 2. T. S. Eliot  | - | Preludes   |
| 3. Wilfred Owen | - | Strange Meeting  |
| 4. W. H. Auden  | - | Musee Des Beaux Arts   |
| 5. Dylan Thomas | - | A Refusal to mourn the death, by fire, of a child in<br>London |

**Suggested readings:**

The Cambridge History of English Poetry, Michael O'Neill (Editor), Cambridge University Press, 2015  
English poetry from the Elizabethans to the Restoration: An Anthology – P.K.Nayar, Orient Blackswan, 2012  
The English Romantic Poets: An Anthology – Pramod K. Nayar, Orient Blackswan Private Limited - New Delhi, 2013  
Oxford Book of English Verse, OUP, UK, C.Ricks. 2000  
Palgrave's golden treasury, F.T.Palgrave, OUP, UK, 2002  
The Oxford Book of Twentieth Century English Verse , Philip Larkin (Editor) OUP, 1972  
20th Century in Poetry, Michael Hulse, Simon Rae Pegasus Books; 1 edition (2013)  
Cambridge Companion to Twentieth-Century English Poetry, Neil Corcoran, Cambridge University Press, 2007  
Harvill Book of 20th Century Poetry in English, Michael Schmidt, The Harvill Press, London, 2003.  
The Book of Literary Terms: The Genres of Fiction, Drama, Nonfiction, Literary Criticism, and Scholarship, Turco, UPNE; 1<sup>st</sup> edition (1999).

**Four-Year Integrated B.A., B.Ed Course**  
**3<sup>rd</sup> Semester**

**English (Honours) -III**

**HEG 301: English Drama from Beginning to Shakespeare**

**Credits- 4+2**

**CH: 4 (L) +2(T)**

**Course Content**

**Max. Marks: 100**

**External : 80; Internal: 20**

**Course Content**

**UNIT- I**

*Everyman*

**UNIT -II**

Christopher Marlowe: *Dr Faustus*

**UNIT- III**

William Shakespeare : *Twelfth Night*

**UNIT- IV**

William Shakespeare: *Macbeth*

**Reference books**

Mc Eachern, Claire (ed.) *The Cambridge Companion to Shakespearean Tragedy*. (Cambridge University Press, Cambridge, 2003).

Mangan, Michael. *A Preface to Shakespeare's Comedies, 1594-1603*. (Pearson Education Ltd, New Delhi, 2003).

**Four-Year Integrated B.A., B.Ed Course**  
**3<sup>rd</sup> Semester**

**English (Honours) -IV**

**HEG 302: English Novel, Short stories and Essays**

**Credits- 4+2**

**CH: 4 (L) +2(T)**

**Max. Marks: 100**

**External : 80; Internal: 20**

**Course Content**

**UNIT-I History of English Novel**

Picaresque novel, Gothic novel, domestic novel, historical novel, science fiction, autobiographical novel, Regional novel, stream of consciousness novel, Bildungsroman.

**UNIT- II**

Charles Dickens: Hard Times

**UNIT-III Short Stories**

Atmosphere, characters, characterization, irony, point view, setting, novella

James Joyce	Araby
H. E. Bates	The Ox
Katherine Mansfield	The Fly
Joseph Conrad	The Lagoon
E.M.Forster	The Eternal Moment

**UNIT-IV History of English  
Essay**

<input type="checkbox"/>	Francis Bacon	Of Studies
<input type="checkbox"/>	Charles Lamb	The Superannuated Man
<input type="checkbox"/>	Joseph Addison	Sir Roger at Home
<input type="checkbox"/>	William Hazlitt	On Actors and Acting
<input type="checkbox"/>	A.G. Gardiner	On saying please

**References:**

Pride and Prejudice, Jane Austen, Orient BlackSwan (2003)

Modern Prose, ed. Michael Thorpe, OUP

Cambridge History of the English Novel, Caserio and Hawes, CUP, 2012

Oxford Book of Essays: OUP,2009

A book of English essays: Penguin India, 2000

Essays of Francis Bacon: CreateSpace, 2014

**Four-Year Integrated B.A., B.Ed Course**  
**4<sup>th</sup> Semester**

**English (Honours) –V**

**HEG 401: Drama: Seventeenth to Twentieth Century**

**Credits- 4+2**

**CH: 4 (L) +2(T)**

**Max. Marks: 100**

**External : 80; Internal: 20**

**Course Content**

**UNIT I**

Aphra Behn :The Rover

**UNIT II**

G.B.Shaw: Pygmalion

**UNIT III**

John Osborne : Look Back in Anger

**UNIT IV**

Samuel Beckett: Waiting for Godot

**Reference books**

Innes, Christopher. *Modern British Drama. The Twentieth Century.*(Cambridge University Press, Cambridge, 2002).



**Four-Year Integrated B.A., B.Ed Course**

**4<sup>th</sup> Semester**

**English (Honours) --VI**

**HEG 402: Fiction: Victorian and Modern**

**Credits- 4+2**

**CH: 4 (L) +2(T)**

**Max. Marks: 100**

**External : 80; Internal: 20**

**Course Content**

**UNIT I**

Charles Dickens : A Christmas Carol

**UNIT II**

E. M. Forster : A Passage to India

**UNIT III**

Rohd Dahl : Lamb to the Slaughter (Short Story)

**UNIT IV**

James Joyce: Selections from 'Dubliners'(Short Story)

**Reference books**

Eagleton, Terry. *The English Novel: An Introduction*. (Willey-Blackwell, London, 2004).

Marsh, M. *Thomas Hardy: The Novels*.(Macmillan, London,2001).

Wolfreys, J. *Dickens to Hardy, 1837-1884*.( Palgrave, London, 2007).

## Four-Year Integrated B.A.,B.Ed Course

### English (Elective) Syllabus

SEM.	Course Code	Course Name	Title of the paper	Contact hours	Credits	Marks		
						Internal	External	Total
1 <sup>st</sup> Semester	EG 101	English	Introduction to English Literature and Literary Forms	4(L)+2(T)	6	20	80	100
2 <sup>nd</sup> Semester	EG 201	English	Reading Literature	4(L)+2(T)	6	20	80	100
3 <sup>rd</sup> Semester	EG 301	English	Phonetics & English Language Teaching	4(L)+2(T)	6	20	80	100
4 <sup>th</sup> Semester	EG 401	English	Syntax, Semantics and Oral Communication	4(L)+2(T)	6	20	80	100

**Four-Year Integrated B.A., B.Ed Course**

**1<sup>st</sup> Semester**

**ENGLISH (Elective)**

**EG 101: Introduction to English Literature and Literary Forms**

**Credits- 4+2**

**CH: 4 (L)+2(T)**

**Course Content**

**Max. Marks: 100**

**External : 80; Internal : 20**

**Unit:-I**

History of English Literature From Old English to Shakespeare

**Unit:-II**

History of English Literature: 17<sup>th</sup> century to Alexander Pope

**Unit:-III**

Literary Types: Tragedy, Comedy, Sonnet, lyric, novel

**Unit:-IV**

16<sup>th</sup> and 17<sup>th</sup> century poetry: Philip Sidney Loving in truth form “Astrophel and Stella”;  
Thomas Wyatt Renouncing of Love; John Donne The Sunne Rising, The Good morrow;  
Andrew marvel to His Coy Mistress

**Four-Year Integrated B.A., B.Ed Course**

**2<sup>nd</sup> Semester**

**ENGLISH (Elective)**

**EG 201: Reading Literature**

**Credits- 4+2**

**CH: 4 (L)+2(T)**

**Max. Marks: 100**

**External : 80; Internal : 20**

**Course Content**

**Unit I**

Introduction to literary studies—nature and purpose; the notion of canon; the rise of English

**Unit II**

**Types: Poetry-sub-genres of poetry:** lyric, sonnet, elegy, satire ode, epic poetry.

**Unit III**

**Types: Drama- characteristics and components, sub-genres :** tragedy, comedy, tragic-comedy, farce

**Unit IV**

**Fiction-** narrative, theme, plot, character, point of view, sub-genres- picaresque, historical, gothic, realistic; mixing of genres

**Textbooks**

Abrams, M H. and Harpham, G. *A Glossary of Literary Terms*.9 th edition.(Wadsworth Publishing, Boston, 2009).Bhattacharyya, A. *Studies in English Rhetoric and Prosody*. (Booksway, Calcutta, 2009).

**Reference book**

Fowler, A. *Kinds of Literature.An Introduction to the Theory of Genres and Modes*.(Clarendon Press, Oxford, 2000).

**Four-Year Integrated B.A., B.Ed Course**

**3<sup>rd</sup> Semester**

**ENGLISH (Elective)**

**EG 301: Phonetics & English Language Teaching**

**Credits- 4+2**

**CH: 4 (L)+2(T)**

**Course Content**

**Max. Marks: 100**

**External : 80; Internal : 20**

**UNIT I**

Phonetics and Spoken English: The Air-Stream Mechanism and the Organs of Speech,  
The sounds of English, Word Accent; Accent and Rhythm in Connected Speech

**UNIT II**

Intonation

Practice in Phonetic Transcription

Practice Language Laboratory

**UNIT III**

English in the global context; Importance of English in India

Language teaching and English Language Teaching: Concepts and Issues

**UNIT IV**

First Language Acquisition, Second Language Learning: basic concepts

Bilingualism, Multilingualism and learning of English

**Textbooks**

Balasubramanian, T. *A Textbook of English Phonetics for Indian Students.*(Macmillan, Madras 1981, 2009). Sarma, Madan M. and Mohapatra, D. *How to Teach English: A Resource Book for Teachers and Teacher Educators.* (Bhabani Print & Publications, Guwahati, 2009).

**Reference books**

Verghese, C. Paul *Teaching English as A Second Language* (Sterling, New Delhi, 2009).

Vyas, M.A. and Patel, Y.L. (eds.) *Teaching English as a Second Language: A New Pedagogy for a New Century* (Prentice-Hall India, New Delhi, 2009.)

## Four-Year Integrated B.A., B.Ed Course

### 4<sup>th</sup> Semester

#### ENGLISH (Elective)

#### EG 401: Syntax, Semantics and Oral Communication

**Credits- 4+2**

**CH: 4 (L)+2(T)**

**Course Content**

**Max. Marks: 100**

**External : 80; Internal : 20**

#### **Unit- I Syntax I**

Descriptive and prescriptive, Grammaticality, Sentence structure, Phrase structure rules, Transformational rules.

#### **Unit- II Syntax II**

Verbs and verb phrases, Nouns and the basic noun phrase, Adjectives and Adverbs  
Finite and Nonfinite Construction, Co-ordination, Complex sentences, Verb and its complementation, Teaching of Grammar.

#### **Unit- III Semantics :**

Semantic features, Ambiguity, Paraphrase, Antonym and synonyms, Names, Sense and reference, Thematic relations.

#### **Unit-IV Oral Communication Skills**

Talking about yourself, family, friends

Getting people to do things – request, order, giving direction, prohibit

Offering to do something – asking permission, giving permission, giving reasons.

Giving opinions – agreeing, disagreeing etc.

Describing things, places and people

Talking about similarities, differences, making suggestions etc.

Complaining, Apologizing, forgiving, expressing disappointment.

#### **References**

1. Language and Linguistics : John Lyons, Cambridge University Press (1981)
2. General Linguistic : R. M. Robins, Routledge, 2014
3. A University Grammar of English : Quirk and Greenbaum, Pearson, India, 2008
4. Introduction to the Grammar of English : Huddleston, CUP, 1984
5. Teaching of Grammar : Jeremy Harmer, Longman, 1987
6. Phonetics and spoken English : Bala Subhramaniam, Trinity, India, 2013
7. Communication Skills : Sanjay Kumar and Pushp Lata, Oxford 2011
8. A little book of language : David Crystal, Yale University Press; reprint edition (2011).

**Four-Year Integrated B.A./B.Sc, B.Ed Course**

1<sup>st</sup> Semester

**Compulsory English**

**CE 101: Foundation Course**

**Credits- 4**

**Marks: 100**

**CH: 4 (L)**

**Internal: 20**

**Max.**

**External : 80;**

**Objectives**

1. To develop overall proficiency in English with a view to enabling the students to use English for communication and for study purposes;
2. To develop the student's interactive skills by developing their ability to listen to English for formal as in class lectures and informal as in face to face interactive situations with a high degree understanding, and helping them to speak English with a reasonable degree of fluency and with an acceptable pronunciation of the sounds of English;
3. To develop student's ability to read English texts-both of scientific and non-scientific nature silently with a high degree of comprehension;
4. To develop the student's skill of writing short paragraphs, formal and informal letters, curriculum vitae/resume, applications of various types, study notes, summary and appropriate words-both scientific and non-scientific.
5. The course has been developed specially for Integrated B.A.B.Ed./B.Sc. B.Ed.

**Course Content and Activities**

**A. Oral Communicative Activities**

Information transfer activities: Pair and group works involving transfer of information (reading a brochure and advertise/a notice a schedule or programme/drawing etc. and discussing these, finding a solution, arriving at a decision through speaking); extempore speech using clues, group discussion, seminar presentation etc.

Pair work: describing pictures, interpreting diagrams, glean information from different types of written materials including articles etc. and talking about them, formal seminar presentation, formal group discussion.

**B. Reading**

Reading and comprehension: global and local comprehension, drawing inferences, Materials: Stories and essays (preferably a collection of comparatively short essays on scientific, interestingly written topics, biographical/autobiographical writings, short stories- adventure and scientific fiction), Reading silently in class followed by short comprehension questions, brief writing exercises, summaries in brief, personal responses (not typical question-answer type)- both oral and written.

Reading material from Internet and talking and writing about them; reading scientific reports, articles collected from newspapers and magazines, Internet etc. and writing notes etc on them.

**C. Writing**

Preparing reports, project proposals and writing reflective and argumentative essays. Writing applications of various types and for various purposes, curriculum vitae/resume, letters to the editors, letters to various agencies. Writing short notes on article/reports read summary of articles/paragraphs read, notes on lectures (talks-radio/TV/audio, video cassettes), opinions on discussions/letters, notice both formal and informal/friendly, notes to inform others etc., interpreting pictures, advertisements, visuals (video, TV etc.) and writing briefly about them.

**D. Vocabulary and grammar**

Using useful but unfamiliar words and phrases in conversation and in writing; Group verbs, idiomatic expressions; synonyms and antonyms  
Structure of simple sentences; use of adverbials, longer sentences, combining sentences, Tenses,  
Use of passive in scientific discourse, various types of questions, direct and indirect narration.

**Textbook**

Sharma, S. and B. Mishra *Communication Skills for Engineers and Scientists* (PHI, New Delhi, 2009)

**Reference book:**

Thomson and Martinet. *A Practical English Grammar* (Oxford ELBS, Delhi, 2008).

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**Four-Year Integrated B.A./B.Sc.,B.Ed Course**

**Alternative English Syllabus**

<b>SEM.</b>	<b>Course Code</b>	<b>Course Name</b>	<b>Contact hours</b>	<b>Credits</b>	<b>Marks</b>		
					<b>Internal</b>	<b>External</b>	<b>Total</b>
<b>1<sup>st</sup> Semester</b>	AE 101	Alternative English I	4(L)	4	20	80	100
<b>2<sup>nd</sup> Semester</b>	AE 201	Alternative English II	4(L)	4	20	80	100
<b>3<sup>rd</sup> Semester</b>	AE 301	Alternative English III	4(L)	4	20	80	100
<b>4<sup>th</sup> Semester</b>	AE 401	Alternative English IV	4(L)	4	20	80	100

**Four-Year Integrated B.A/B.Sc., B.Ed Course**

**1<sup>st</sup> Semester**

**AE 101: ALTERNATIVE ENGLISH-I**

**Credits: 4**  
**CH: 4L**

**Max. Marks: 100**  
**External: 80; Internal: 20**

**Course Content:**

**Unit-I**

**English poetry:**

Shakespeare: Sonnet 18

Herrick: "To Daffodils"

Donne: "Good Morrow"

Blake: "The Tyger"; "London"

**Unit-II**

**Short story:**

Somerset Maugham: The Lotus Eater

**Unit-III**

**Drama:**

Arthur Miller: Death of a Salesman

**Unit-IV**

**Writing a paragraph on a given topic**

**Textbook**

Materials (poems and stories) will be supplied by the Department

**Four-Year Integrated B.A/B.Sc., B.Ed Course**

**2<sup>st</sup> Semester**

**AE 201: ALTERNATIVE ENGLISH-II**

**Credits: 4**

**CH: 4L**

**Max. Marks: 100**

**External: 80**

**Internal: 20**

**Course Content:**

**UNIT -I**

**English poetry:**

William Wordsworth: "Lucy Gray"

Cowper: "Poplar Field"

Tennyson: "Ulysses"

Browning: "The Last Ride Together"

Dickinson: "This was a poet it is that"

**UNIT-II**

**Short story:**

Guy de Maupassant: "The Necklace"

**UNIT-III**

**Drama:** Oliver goldsmith: She stoops to Conquer

**UNIT-IV**

**Writing a paragraph on a given topic**

**Textbook**

Materials (poems and stories) will be supplied by the Department

**Four-Year Integrated B.A/B.Sc., B.Ed Course**

**3<sup>rd</sup> Semester**

**AE 301: ALTERNATIVE ENGLISH-III**

**Credits: 4**

**CH: 4L**

**Max. Marks: 100**

**External: 80**

**Internal: 20**

**Course Content:**

**UNIT-I**

**Poetry:**

W.B.Yeats: "The Lake Isle of Innisfree"

T.S.Eliot: "The Journey of the Magi"

Ted Hughes: "Hawk Roosting"

A.K.Ramanujan: "Invisible Bodies"

**UNIT-II**

**Short story:**

Hemingway: "A Clear Well-lighted Place"

**UNIT-III**

**Novel:**

Hemingway: *The Old Man and the Sea*

**UNIT-IV**

**Writing a paragraph on a given topic**

**Textbook**

Materials (poems and stories) will be supplied by the Department

**Four-Year Integrated B.A/B.Sc., B.Ed Course**

**4<sup>th</sup> Semester**

**AE 401: ALTERNATIVE ENGLISH - IV**

**Credits: 4**

**CH: 4L**

**Max. Marks: 100**

**External: 80**

**Internal: 20**

**Course Content:**

**UNIT-I**

**Short story:**

Leslie Marmon Silko: "Yellow Woman"

Jean Rhys: "The Day They Burned the Books"

**UNIT-II**

**Prose:**

Charles Lamb: "Poor Relations"

Bertrand Russell: "On Being Modern-Minded"

**UNIT-III**

**Novel:**

Oscar Wilde: A Picture of Dorian Gray

**UNIT-IV**

**Writing an essay on a given topic**

**Textbook**

Materials (stories and essays) to be supplied by the Department

## Four-Year Integrated B.A/B.Sc.B.Ed Course

### Bengali Syllabus

SEM.	Course Code	Course Name	Contact hours	Credits	Marks		
					Internal	External	Total
<b>1<sup>st</sup> Semester</b>	BE 101	Bengali I	4(L)	4	20	80	100
<b>2<sup>nd</sup> Semester</b>	BE 201	Bengali II	4(L)	4	20	80	100
<b>3<sup>rd</sup> Semester</b>	BE 301	Bengali III	4(L)	4	20	80	100
<b>4<sup>th</sup> Semester</b>	BE 401	Bengali IV	4(L)	4	20	80	100



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SYLLABUS OF B.A./B.Sc. B. Ed. PROGRAMME

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Hindi Syllabus

SEM.	Course Code	Course Name	Contact hours	Credits	Marks		
					Internal	External	Total
1 <sup>st</sup> Semester	HI 101	Hindi I	4L	4	20	80	100
2 <sup>nd</sup> Semester	HI 201	Hindi II	4L	4	20	80	100
3 <sup>rd</sup> Semester	HI 301	Hindi III	4L	4	20	80	100
4 <sup>th</sup> Semester	HI 401	Hindi IV	4L	4	20	80	100

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Four-Year Integrated B.A/B.Sc., B.Ed Course

पठन-समय-सूची : HI-101: HINDI-1

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Credits: 4  
CH: 4L

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Max. Marks: 100  
External: 80; Internal: 20

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Four-Year Integrated B.A/B.Sc., B.Ed Course

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Credits: 4

CH: 4L

Max. Marks: 100

External: 80; Internal: 20

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Four-Year Integrated B.A/B.Sc., B.Ed Course

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संस्कृत परीक्षा HI-104: HINDI-4

Credits: 4  
CH: 4L

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Max. Marks: 100  
External: 80; Internal: 20

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**Education Syllabus for Four-Year Integrated B.Sc/B.A.B.Ed**

SEM □□ □□	Course Code	Course Name	Title of the paper	Contac t hours	Credi ts	Marks		
						Inter nal	Exter nal	Total
1 <sup>st</sup> □□ Semester	ED 101	Education I	Language Across Curriculum	4L	4	20	80	100
2 <sup>nd</sup> □□ Semester	ED 201	Education II	Childhood and Growing Up	4L	4	20	80	100
	ED 202	Education III	Contemporary India and Education	4L	4	20	80	100
3 <sup>rd</sup> □□ Semester	ED 301	Education IV	Learning and Teaching	4L	4	20	80	100
	ED 302	Education V	Assessment for Learning	4L	4	20	80	100
4 <sup>th</sup> □□ Semester	ED 401	Education VI	Part-A: Reading and Reflecting on Text Part-B: Peace Education	4L	4	10 +	40 +	100
	ED 402	Education VII	Part-A: Understanding Discipline and Subjects Part: B Yoga and Physical Education	4L	4	20	80	100
5 <sup>th</sup> □□ Semester	ED 501	Education VIII	Knowledge and Curriculum	4L	4	20	80	100
	ED 502	Education IX	Part-A: Drama and Arts in Education Part-B: Gender, School and Society	4L	4	10 +	40 +	100
	ED 503	Education X	Critical understanding on ITC	4L	4	20	80	100
	ED 504	Education XI	Creating an Inclusive School	4L	4	20	80	100
6 <sup>th</sup> □□	ED 601	Education XII	Guidance and Counselling	4L	4	20	80	100

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6 <sup>th</sup> Seme ster	ED 602	Education XIII	Pedagogy A: Mathematics -I	4L	4	20	80	100
			Pedagogy A: English – I					
			Pedagogy A: Bengali – I					
			Pedagogy A: Hindi - I					
ED 603	Education XIV	Pedagogy B :Physical Sciences I	4L	4	20	80	100	
		Pedagogy B: Social Science I						
7 <sup>th</sup> Seme ster	ED 701 A	Education XV	Pedagogy A: Mathematics -II	4L	4	20	80	100
	ED 701 B		Pedagogy A: English – II					
	ED 701 C		Pedagogy A: Bengali – II					
	ED 701 D		Pedagogy A: Hindi – II					
	ED 702 A	Education XVI	Pedagogy B :Physical Sciences II	4L	4	20	80	100
	ED 702 B		Pedagogy B: Social Science II					
	ED 703	School Internship – I	Initial School Experience Programme (Four Weeks)	Four weeks	4	50	50	100
8 <sup>th</sup> Seme ster	ED 801	School Internship – II	School Internship-II (Sixteen Weeks)	16 weeks	12	150	150	300
			Total		80	520	1480	2000

### **Four-Year Integrated B.A/B.Sc., B.Ed Course**

#### **1<sup>st</sup> Semester**

#### **Education -I**

#### **ED 101: LANGUAGE ACROSS CURRICULUM**

**Credits : 4**

**CH: 4 L**

**Maximum Marks: 100**

**External: 80**

**Internal:20**

**Course Content:**

#### **Unit-I**

Understanding the language background of students: Language: meaning, concept and process of development: Function of language: Theory of language development-Chomsky, Bloomfield

#### **Unit-II**

Language diversity in classroom: Bilingualism and Multilingualism- meaning, nature & characteristics: Understanding of Multilingualism in the classroom; Home Language & school Language-their similarity and dissimilarity, Standard language vs home dialects.

#### **Unit-III**



Different strategies for language development: Classroom discourse-concept, nature; techniques for using oral language in the classroom; Tools for language learning-mode of discussion, questioning-meaning ,nature of questioning in the classroom; types of questions and teachers role

#### **Unit-IV**

Reading in the context areas-social sciences, science ,mathematics; Nature of Expository texts vs Narrative texts; Transactional vs Reflective text; Schema Theory; Text structures; examination context area textbook; reading strategies for children-note making, summarizing, making reading-writing ;writing to learn and understand

#### **References:**

- Anderson, R.C. (1984). Role of the Reader's Schema in Comprehension, Learning and Memory. In R.C. Anderson, J. Osbon & R.J. Tierney (ed) Learning to Read in American schools: Based Readers and content texts. Hillsdole, Lawrance Erlbaum Associates: New Jersey.
- Applying a Vygotskian Model of Learning and Development in B. Spodek (ed.) Handbook of research on the education of young children. Macmillan: New York.
- Armbruster, Bonnie B. (1984) The Problem of "Inconsiderate Text" In Duffy, G. G. (ed.) Comprehension Instruction, Perspectives and Suggestions. Longman: New York.
- Butler, A. and J. Turnbull, (1984) Towards Reading-Writing Classroom Primary English Teaching Association Cornell University: New York.
- Freedman S. W. and A. H. Dyson (2003) Writing in Flood J. et. al. Handbook of Research on Teaching English Language Arts:Lawrence Erlbaum Associates Inc: New Jersey, USA..
- Kumar Krishna (2007) The Child's Language and the Teacher. National Book Trust: new Delhi.
- Labov, W. (1972) The logic of Non- Standard English. In Language in Education. Prepared by Language and Learning course Team. Routledge: London.
- Martin, Jr. B. (1987) The Making of a Reader: A Personal Narrative. In Bernice E. Cullinan,

**2<sup>nd</sup> Semester**

**Education II**

**ED 201: CHILDHOOD AND GROWING UP**

**Credits: 4**

**CH: 4 L**

**Maximum Marks: 100**

**External: 80**

**Course Content:**

**Unit: I**

**Growth and Development:** concept, principles and characteristics; Development and maturation.

**Factors Influencing Development:** Development as a result of interactions between individual-potential and external environment (physical, socio-cultural, ecological, economic and technological).

**Individual differences:** Concept and Types (intra and inter); Implications of individual (biological, physical, emotional, cognitive, social and moral) for organizing educational program's (Curricular, Other Curricular, School and Classroom climate building) Understanding child in home and school context; Case study

**Unit-II**

**Stages and Dimensions of Development:** Stages- Childhood and adolescence (early and late); Dimensions- physical, social, emotional, cognitive and moral development; Developmental tasks during different stages facilitating holistic development (individual and social). Erickson's views on psychosocial development and Kohlberg's views on moral development

**Cognitive and language development:** cognitive developmental stages of Piaget; Vygotsky's theory of concept and language development; language development theory of Chomsky

**Memory:** Meaning, Types; Sensory working and long term, strategy for developing memory

**Unit: III**

**Transfer of learning:** Meaning, nature, types and role of teacher for promoting positive transfer of learning

**Motivation:** Meaning, nature and techniques of motivating learners. Developing self-motivation.

**Unit-IV**

**Creativity:** Meaning, nature and strategies for nurturing creativity

**Adolescence Education:** Concept, Nature and Importance

**Peer pressure:** Meaning, importance, consequences and strategies

**Life skill education for adolescents:** Meaning, importance, different life skills and strategy for developing life skills

Role of teacher, counsellor and parents in dealing adolescence problems

**References:**

- Cole, M and Cole, S (1989). The Development of Children, Scientific American Books, New York
- Huslok, E.B. (2003). Child Growth and Development, Tata McGraw Hill
- Kakkar, S (1978). The Inner World: A Psychoanalytic Study of Childhood and Society in India. Oxford University Press, New Delhi

- NCERT: Module on Adolescence Education
- Mishra, A (2007), Everyday Life in a Slum in Delhi. In D.K. Behera (Ed.0. Childhood in South Asia. New Delhi: Pearson Education India
- Nambissan, G.B. (2009). Exclusion and Discrimination in Schools: Experiences of Dalit Children. Indian Institute of Dalit Students and UNICEF
- Parry, J. (2005). Changing Childhoods in Industrial Chattisgarh. In R. Chopra and P. Jeffery (Eds), Educational regimes in Contemporary India. Sage
- Piaget, J. (1997). Development and Learning. In M. Gauvain and M. Cole (Eds), Readings on the development of children. New York: WH Freeman and Company
- Saraswathi, T.S. (1999). Adult-Child Continuity in India: Is Adolescence a myth or an emerging reality? In T.S. Saraswathi (Ed), Culture, Socialisation and Human Development: Theory, research and applications in India. New Delhi. Sage
- Sharma, N (2011). Understanding Adolescence, MBT India
- Singh, A (Ed), (2015). Human Development: A Life Span Approach. Orient Black Swan, Delhi
- Woolfolk, A. (2008). Educational Psychology. Pearson Education.

2<sup>nd</sup> Semester

Education -III

**ED 202: CONTEMPORARY ISSUES IN EDUCATION**

Credits : 4

CH: 4 L

Maximum Marks: 100

External: 80

Internal: 20

Course Content:

**Unit-I:**

**Social Diversity-** meaning, ways to enrich our life; impact of social diversity in posing challenges for universal education; Highlighting features of social diversity.

**Diversity at different levels-** individuals, regions, languages, religions, castes, tribes; nature of such level wise diversification; setting a variety of demands of social diversity and the role of education.

**Unit – II**

**Indian Constitution & Education-** Acquaintance with the Preamble, Fundamental Rights, Fundamental Duties of Citizens and Directive Principles of State Policies; relationship between Constitution & education.

**Constitutional values & education** – values enshrined in Indian Constitution; role of constitutional values in formulating aims of education; impediments of inequality, discrimination and marginalization and their removal through education.

**Unit – III**

**Policies in Education** – Discussion on different policies of education with special emphasis on NPE'86; Recommendations to be adopted in reframing school education.

**Shaping of School education & education policies** – interaction of various policy imperatives, financial allocation, grant-in-aid, raising of funds, fields conditions & pressures exerted by diverse social groups.

## Unit – IV

**Contemporary issues & policies** – Discussions on RTI Act, 2009, SSA, RSMA; thrust towards enrolling & retaining marginalized children; role of teacher in the context of universal & inclusive education.

**Diverse social groups of India & education** – Role of diverse social groups in pre-independence era of education; impact of Nai Talim; community participation and development in education.

### References:

- Gupta, S. Education in Emerging India (Shipra Publications, Delhi, 2008)
- Rao, V. K. and Nayak, A.K. Secondary Education (A.P.H. Publishing Corporation, New Delhi, 2002).
- Govt. of India National Policy on Education (Min. of HRD, New Delhi, 1986)
- Govt. of India. Programme of Action (NPE). (Min of HRD, New Delhi, 1992)
- UNESCO. Education for All: The Quality Imperative. EFA Global Monitoring Report. (UNESCO, Paris, 2004)
- Kumar, Arvind. Environmental challenges of the 21st century (APH Publishing Corporation, New Delhi, 2003)

**Four Year Integrated B.A. /B.Sc. B.Ed. Course**

**Semester-III**

**EDUCATION**

**ED 301: Learning and Teaching**

**Credits: 4**

**CH: 4L**

**Maximum Marks: 100 (External-80+Internal-20)**

**Course objectives:**

After the completion of the course the students will

- ❖ Understand the meaning, nature and characteristics of learning and teaching
- ❖ Analyze the different theories of learning and their contribution in the field of education
- ❖ Understand different issues related to learning
- ❖ Critically examine the nature of learning both inside and outside of the school
- ❖ Acquire knowledge about different approaches of teaching
- ❖ Analyze the nature of teaching in diverse classroom
- ❖ Critically analyze the teaching as a profession
- ❖ Know the ethical aspects of teacher and teaching
- ❖ Understand the maxims of teaching

**Unit-1: Understanding Learning**

- Learning: meaning, nature, characteristics; learning as both a process and a product.
- Theories of learning; Thorndike's connectionism; Pavlov's classical and Skinner's operant conditioning, learning by insight(Kohler); cognitive (Piaget); Constructivism (Vygotsky); Contributions of these theories to learning and education.

**Unit-2: Understanding the learners/Learning & Learner related Issues**

- Understanding the learners: - learner and learning; factors influencing both learner and learning; role of motivation, maturation, environment and attention in learners performance
- Issues related to learning; curiosity, interest, active engagement, and inquiry; work perspective of issues and their impact on learning.

### **Unit-3: Learning inside and outside the school**

- Learning inside the school-nature of learning inside the classroom practices; barriers faced by learners in the school; possible measures to overcome such challenges.
- Learning outside the school-nature and types of learning outside the school; role of the teacher in developing such type of learning.

### **Unit-4: Understanding Teaching**

- Teaching; meaning, nature, characteristics, principles; Relationship between teaching and learning; Teaching vs. Instruction;
- Level of teaching; understanding; memory; reflective
- Phases of teaching; pre-active, inter-active and post active; teaching as science as well as arts

### **Unit-5: Teaching as a profession**

- Teaching as a profession- meaning and characteristics; professional qualities of a teacher;
- Teacher's accountability; professional ethics for teacher; need and opportunities for professional growth
- Model of teaching(Jerome Bruner's Concept Attainment Model, Richard Suchman's Inquiry Training Model), Maxims of teaching

**Four Year Integrated B.A. /B.Sc. B.Ed. Course**  
**Semester-III**  
**EDUCATION**  
**ED 302: Assessment for Learning**  
**Credits: 4**  
**CH: 4L**  
**Maximum Marks: 100**  
**(External-80+Internal-20)**

**Course objectives:**

The Student teacher will be able to:

- ❖ Understand the meaning of assessment and evaluation and their role in teaching learning process.
- ❖ Understand the assessment of different affective learning.
- ❖ Understand the different assessment tool.
- ❖ Know data analysis & interpretation of result in evaluation.
- ❖ Know about the feedback system of evaluation.

**Unit1: Perspective on Assessment & Evaluation**

- Meaning of measurement, test, examination, assessment and evaluation; their interrelationship.
- Classification of assessment based on purpose (formative, summative, prognostic, diagnostic).
- Nature of information gathered (Qualitative & Quantitative), Mode of response (oral, written & performance), nature of interpretation (Norm referenced, criterion referenced).

**Unit2: Areas & emerging practices of Assessment:**

- Dimensions of learning: cognitive, affective & psychomotor.
- Recent trends in evaluation; Grading & Choice Based Credit System (CBCS) Continuous Comprehensive Evaluation (CCE), online assessment, Assessment of learning, assessment for learning.



- Assessment of attributes (Achievement, Aptitude, Attitude, Interest, Intelligence, Creativity)

### **Unit3: Tools and Techniques for Assessment:**

- Testing tools and non-testing tools: Testing devices (achievement test, diagnostic test, proficiency test etc) & non-techniques devices (assignment, projects, observation, interview etc) and their application in learning situation.
- Kinds of test (teacher made and standardized test) and their construction with reference to blueprint; procedures followed.
- Criteria of a good evaluation tool; issues & problems (marking vs. grading, objectivity vs. subjectivity, close-ended vs. open-ended, multiple choice vs. short answer types test items)

### **Unit-4: Statistical Approaches**

- Data analyses; tabulation, Frequency distribution, Graphical representation of data
- Measures of Central tendency (mean, median, mode), calculation and uses
- Measures of variability; Range, Average/mean deviation (AD), quartile deviation (QD), standard Deviation (SD), calculation and uses
- Normal distribution; divergence from normality-Skewness & kurtosis
- Correlation; meaning, types (Product moment and rank difference) and their interpretation, calculation and uses.
- Standard scores; t score and z scores, calculation and uses

### **Unit-5 Feedback & Reporting**

- Feedback for assessment and/or evaluation purposes; Feedback is an essential component of assessment. Characteristics of effective feedback, Create a digital portfolio,
- Reporting student's performance: (progress report, Cumulative report card, Anecdotal record).
- Present assessment structure followed in school of Tripura; maintenance of student's record prescribed by appropriate authority in school of Tripura.

**FOUR YEARS INTEGRATED B.A. B.ED AND B.SC B.ED SYLLABUS**  
**4<sup>th</sup> Semester**  
**EDUCATION -VII**  
**ED 402:**

**PART-A: UNDERSTANDING DISCIPLINE AND SUBJECTS**

**PART-B: YOGA AND PHYSICAL EDUCATION**

**Credits: 4**

**CH: 4L**

**Maximum Marks: 100**

**External: 80**

**Internal: 20**

**PART-A: UNDERSTANDING DISCIPLINE AND SUBJECTS**

**Unit-I: Basics of Academic disciplines and subjects**

- **Discipline and subject:** Meaning, Nature and characteristics of academic discipline, criteria of a discipline; meaning, nature and characteristics of subject, differences and relation between subject and discipline.
- **Interdisciplinary and multidisciplinary approach:** Education as inter-disciplinary field of study, Emergence of various disciplines into education: Merger of various disciplines into education; Interrelation and interdependence among various school subjects.

**Unit-II: Exploring Academic Disciplines and subject**

- **Language as a subject and discipline:** Nature, history, method, understanding and place in the school curriculum; Issues and challenges in teaching language.
- **Social Science as a subject and discipline:** Meaning, Nature, history, method; social science as an area of study; Need of studying social science through interdisciplinary perspectives; Place and relevance in school curriculum.
- **Mathematics as a subject and discipline:** Nature, history and Place of mathematics in school curriculum: Mathematics in day to day life; Relationship of mathematics with other subjects.
- **Science as a subject and discipline:** Nature, history of science, Scientific method, understanding and place of scientific knowledge in the schema of school curriculum; Curriculum syllabus and text book

## **PART-B: YOGA AND PHYSICAL EDUCATION**

### **Unit-III: Understanding Yoga and Self**

- **Introduction to Yoga**—it's philosophy, meaning and misconceptions about Yoga, Basis of Yoga, Origin and history of development of Yoga, Aṣṭāṅga Yoga or Rāja Yoga, Aims and objectives of Yoga and yoga education; its role in wellbeing, uses of yoga in different context, Yogic practices for healthy living, Yoga as a way of life to cope with stress or for stress management,
- **The streams and Schools of Yoga:** Karma Yoga ,Bhakti Yoga ,Rāja Yoga ,Jñāna Yoga; schools-Rāja Yoga and Haṭha Yoga
- **Understanding the self & self concept**—meaning, concept, important factors influencing the development of self concept. Yoga and Self Development; Concept and nature of self-development
- **Yogic concepts of personality:** Dimensions of integrated personality: Yoga for integrated personality development.
- **Self identity-** Identity of the self from gender relational, social and cultural view points, professional identity of a teacher.

### **Unit IV: Physical Education and physical fitness**

- **Physical Education**—Meaning, nature Aims, Objectives, Scope and Importance of Physical Education: status of Physical Education in the school curriculum.
- **Physical Fitness**—Meaning, Definition, Components and Benefits, sports skills, indigenous and self-defence activities, Common Sports Injuries and First aid.
- **Games and sports**—athletics (general physical fitness exercises), games (lead-up games, relays and major games) rhythmic activities, Gymnastics and their impact on health, Commonly-abused substance and drugs and ways of prevention and inhabitation

### **Suggested reading**

- Bridges, D. (2006), 'The Disciplines and the Discipline of Educational Research', Journal of Philosophy of Education 40:2, pp. 259-272.
- Besselaar, P.V.D. & Heimeriks, G. (2001), "Disciplinary, Multidisciplinary, Interdisciplinary- Concepts and Indicators, Social Science Informatics program, University of Amsterdam, pp- 1-4
- Guy, J. & Small, I. (2010), "The Nature of Disciplinary Knowledge", Cambridge University Press, pp-1-3  
Krishnan, A. (2009), "What are academic disciplines?" University of Southampton, ESRC National Center for Research Methods, pp-7-31.
- Paleeri, S. (2015). Evolution and Emerging Trends in Academic Discipline. NSS Training College, Ottapalam: Kerala.
- Deborah A. Wuest, Charles A. Bucher, "Foundation of Physical Education Exercise Science and Sports" Tata McGraw Hill, Pvt. Ltd., New Delhi
- John E. Mixton, Ann E. Jewett, "An Introduction to Physical Education, W.B. Saunders Company.London

- John Cheffers, Tom Evaul, "Introduction to Physical Education-Concept of Human Movement Prentice Hall Engle Wood" New Jersey
- Bette J., Logsdon & Others, "Physical Education for Children", Lea & Febiger, Philadelphia.
- National Council for Teacher Education (NCTE), Yoga Education (2015), New Delhi.
- Anantharaman, T.R. (1996). Ancient Yoga and Modern Science. New Delhi: Munshiram Manoharlal Publishers Pvt Ltd.
- Bhavanani, A.D. (2008). A Primer of Yoga Theory. Pondicherry: Dhivyananda Creations, Iyyangar Nagar.
- Bhogal, R.S. (2010). Yoga & Mental Health & Beyond. Lonavla: Kaivalyadhama SMYM Samiti,
- Bhogal, R.S. (2011). Yoga & Modern Psychology. Lonavla: Kaivalyadhama SMYM Samiti.
- Devi, I. (1987). Yoga, The Technique of Health and Happiness. Bombay: Jaico Publishing House.
- Goel, A. (2007). Yoga Education, Philosophy and Practice. New Delhi: Deep and Deep Publications. [http//www.wikipedia.com](http://www.wikipedia.com)

**FOUR YEARS INTEGRATED B.A. B.ED AND B.SC B.ED SYLLABUS**  
**4<sup>TH</sup> SEMESTER**  
**Education –VI**  
**ED 401:**

**PART-A: READING AND REFLECTING ON TEXTS**  
**PART- B: PEACE EDUCATION**

**Credits: 4**  
**CH: 4L**

**Maximum Marks: 100**  
**External: 80**  
**Internal: 20**

**PART - A: READING AND REFLECTING ON TEXTS**

**Unit I: Understanding Text and Reading**

- Reading: Meaning, Purpose, Process and importance, types; Reading across the Curriculum
- Building the Reading Habit, Reading skill; Acquisition of Reading Skills
- Diverse texts- Types and Significance: Types of texts—Literary or non-literary; Narrative, expository, technical & persuasive). Types of texts related to education – empirical, conceptual, historical, policy documents, narrative texts, expository texts, ethnographies.
- Reading beyond Text: Making Connections with the text- Text with Self, Text with Text and Text with World

**Unit-II: Text, Reflection and Metacognitive skills for Reading-**

One or more stories from the following collection:

- How I Taught My Grandmother to Read and other Stories- Sudha Murthy-Puffin. Books,
- Tales of the Open Road- Ruskin Bond- Penguin UK-2006

Excerpts from the following:

- The Diary of a Young Girl: Anne Frank, Random House.

- The man who planted trees-Jean Giono, Chelsea Green Pub.
- *I have a Dream* Texts of speech delivered on Aug 28, 1963-Martin Luther King (Text and YouTube version available.)

#### Essays /Excerpts from literary texts

- The Elephant, the Tiger and the Cellphone-ShashiTharoor, Penguin, India.
- Nine Lives- In Search of the Sacred in Modern India- William Dalrymple, Bloomsbury, London.
- Running in the Family- Michael Ontage, Bloomsbury, and London.
- Interpreter of Maladies – (Title Story) – Jhumpa Lahari, Mariner Books.

#### Essays /Excerpts from Educational and Scientific Texts

- Medium of education (The selected works of Gandhi- Vol.6), Navajeevan Publication.
- A Brief History of Time- Stephen Hawking, Random House.
- Fall of a Sparrow-Salim Ali, Oxford.
- Education and world peace. In Social responsibility, (Krishnamurti, J.) Krishnamurti Foundation.
- National curriculum framework - 2005. NCERT
- Civilization and progress. In Crisis in Civilisation and Other Essays by Rabindranath Tagore
- Wings of Fire: An Autobiography of A P J Abdul Kalam. Universities Press.

## **PART-B: PEACE EDUCATION**

### **Unit-III: Introduction to Peace Education**

- Meaning, Nature and scope of Peace Education: Amis, objectives peace education; status of peace education in the curriculum

### **Unit-IV: Integrating peace Education in the Curriculum**

- Six major media of integration: subject context, subject perspectives, Teaching methods, co-curricular activities, staff development, classroom management and school management, practical steps to build peace culture in school.

### **Suggested Reading**

- Aber, J.L. Brown, J.L.A. Henrich, C.C. (1999) Teaching Conflict Resolution: An effective.
- Barash, P. David (2000). Approaches to Peace, Oxford University Press, New York.
- Dr. Haseen Taj (2005) Current challenges in Education, Neelkamal Publications. Pvt. Ltd
- Dr. Haseen Taj (2005) National Concerns and Education, Neelkamal Publications. Pvt. Ltd
- Galtung, I (1996). Peace by peaceful means: Peace and conflict, Development and civilization, PRIO – International peace research institute of Oslo and Sage Publications.
- Hicks, David, (1988), Education for Peace New York: Routledge. Adams, D (Ed) (1997) UNESCO and a culture of Peace: Promoting a Global Movement. Paris UNESCO.
- Prakashan, Agra-27. [Wttp://www.un.org/cyberschoolbus/peace/content.htm](http://www.un.org/cyberschoolbus/peace/content.htm).
- Reading And Reflecting On Texts Paperback – 1 January 2016 by Dr. S.S. Srivastava
- Reading and Reflecting on the Texts. Indira Gandhi National Open University School of Education

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