

Revision Exam Syllabus 2021 - 22 (November and December)

STANDARD-12

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SYLLABUS 2021-2022

STANDARD: 12

பாடம்: பொதுத்தமிழ்

| மாதம் | மொத்த பாடங்கள் | இயல் | பாடப்பொருள் |
|----------|----------------|------|--|
| நவம்பர் | 2 | 1 | செய்யுள் – இளந்தமிழே உரைநடை – தமிழ்மொழியின் நடையழகியல் செய்யுள் – தன்னேர் இலாத தமிழ் துணைப்பாடம் – தம்பி நெல்லையப்பருக்கு இலக்கணம் – தமிழாய் எழுதுவோம் |
| | | 2 | செய்யுள் – பிறகொருநாள் கோடை இலக்கணம் – நால்வகைப் பொருத்தங்கள் |
| டிசம்பர் | 1 | 3 | உரைநடை – தமிழர் குடும்பமுறை செய்யுள் – விருந்தினர் இல்லம், கம்பராமாயணம் |
| | | | துணைப்பாடம் – உரிமைத்தாகம் இலக்கணம் – பொருள் மயக்கம் வாழ்வியல் – திருக்குறள் |

SYLLABUS 2021-2022

STANDARD: 12

SUBJECT: ENGLISH

| MONTH | TOTAL NO. OF UNITS | TOPICS |
|----------|--------------------|--|
| November | 1 | Prose -Two Gentlemen of Verona Supplementary - God Sees the Truth but Waits |
| | | Grammar - Tenses, Modal Auxiliaries, Reported Speech |
| December | 1 | Poem - Our Casuarina Tree |
| | | Grammar - Prepositions, Prepositional phrases, Conjunctions, Connectives or Linkers |

SYLLABUS 2021-2022

STANDARD: 12

SUBJECT: MATHEMATICS

| MONTH | TOTAL No. OF UNIT | UNIT | TOPICS |
|----------|-------------------|--|--|
| November | 2 | 1. Applications of Matrices and Determinants | 1.1 Introduction 1.2 Inverse of a Non-Singular Square Matrix 1.2.1 Adjoint of a square Matrix 1.2.2 Definition of inverse matrix of a square matrix 1.2.3 Properties of inverses of matrices 1.2.4 Application of matrices to Geometry 1.3 Elementary Transformations of a Matrix 1.3.1 Elementary row and column operations 1.3.2 Row-Echelon form 1.3.3 Rank of a Matrix 1.4 Applications of Matrices: Solving System of Linear Equations 1.4.1 Formation of a System of Linear Equations 1.4.2 System of Linear Equations in Matrix Form 1.4.3 Solution to a System of Linear equations 1.4.3 (i) Matrix Inversion Method 1.4.3 (ii) Cramer's Rule 1.4.3 (iii) Gaussian Elimination Method (*All properties without proof) |
| | | 2. Complex Numbers | 2.1 Introduction to Complex Numbers 2.1.1 Powers of imaginary unit 2.2 Complex Numbers 2.2.1 Rectangular form 2.2.2 Argand plane 2.2.3 Algebraic operations on complex number 2.3 Basic Algebraic Properties of Complex Numbers 2.3.1 Properties of complex numbers 2.4 Conjugate of a Complex Number 2.4.1 Geometrical representation of conjugate of a complex number 2.4.2 Properties of Complex Conjugates |

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| November | | 2. Complex Numbers | <p>2.5 Modulus of a Complex Number</p> <p>2.5.1 Properties of Modulus of a complex number</p> <p>2.5.2 Square roots of a complex number</p> <p>2.6 Geometry and Locus of Complex Numbers (*All properties without proof)</p> |
| December | 2 | 3. Theory of Equations | <p>3.1 Introduction</p> <p>3.2 Basics of Polynomial Equations</p> <p>3.2.1 Different types of Polynomial Equations</p> <p>3.2.2 Quadratic Equations</p> <p>3.3 Vieta's Formulae and Formation of Polynomial Equations</p> <p>3.3.1 Vieta's formula for Quadratic Equations</p> <p>3.3.2 Vieta's formula for Polynomial Equations</p> <p>3.3.2 (a) The Fundamental Theorem of Algebra</p> <p>3.3.2 (b) Vieta's Formula</p> <p>3.3.2 (b) (i) Vieta's Formula for Polynomial equation of degree 3</p> <p>3.3.2 (c) Formation of Polynomial Equations with given Roots</p> <p>3.4 Nature of Roots and Nature of Coefficients of Polynomial Equations</p> <p>3.4.1 Imaginary Roots</p> <p>3.4.2 Irrational Roots</p> <p>3.4.3 Rational Roots</p> <p>3.6 Roots of Higher Degree Polynomial Equations</p> <p>3.7 Polynomials with Additional Information</p> <p>3.7.1 Imaginary or Surds Roots</p> <p>3.7.2 Polynomial equations with Even Powers Only</p> <p>3.7.3 Zero Sum of all Coefficients</p> <p>3.7.4 Equal Sums of Coefficients of Odd and Even Powers</p> <p>3.8 Polynomial Equations with no additional information</p> <p>3.8.2 Reciprocal Equations</p> <p>3.9 Descartes Rule</p> <p>3.9.1 Statement of Descartes Rule</p> <p>3.9.2 Attainment of bounds (*All properties without proof)</p> |

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| December | | 4. Inverse Trigonometric Functions | <p>4.1 Introduction</p> <p>4.2 Some Fundamental Concepts</p> <p>4.2.1 Domain and Range of trigonometric functions</p> <p>4.2.2 Graphs of functions</p> <p>4.2.3 Amplitude and Period of a graph</p> <p>4.2.4 Inverse functions</p> <p>4.2.5 Graphs of inverse functions</p> <p>4.3 Sine Function and Inverse Sine Function</p> <p>4.3.2 Properties of the sine function</p> <p>4.3.3 The inverse sine function and its properties</p> <p>4.4 The Cosine Function and Inverse Cosine Function</p> <p>4.4.2 Properties of the cosine function</p> <p>4.4.3 The inverse cosine function and its properties</p> <p>4.5 The Tangent Function and the Inverse Tangent Function</p> <p>4.5.2 Properties of the tangent function</p> <p>4.5.3 The inverse tangent function and its properties</p> <p>4.6 The Cosecant Function and the Inverse Cosecant Function</p> <p>4.6.2 The inverse cosecant function</p> <p>4.7 The Secant Function and Inverse Secant Function</p> <p>4.7.2 Inverse secant function</p> <p>4.8 The Cotangent Function and the Inverse Cotangent Function</p> <p>4.8.2 Inverse cotangent function</p> <p>4.9 Principal Value of Inverse Trigonometric Functions</p> <p>(*All properties without proof)</p> |
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SYLLABUS 2021-2022

STANDARD: 12

SUBJECT: PHYSICS

| MONTH | TOTAL NO. OF UNITS | UNIT | TOPICS |
|----------|--------------------|-------------------|--|
| November | 2 | 1. Electrostatics | 1.1 Introduction 1.1.1 Historical background of electric charges 1.1.2 Basic Properties of charges 1.2 Coulomb's law 1.2.1 Superposition principle 1.3 Electric field and Electric field lines 1.3.1 Electric Field 1.3.2 Electric field due to the system of point charges 1.4 Electric Dipole and its properties 1.4.1 Electric dipole 1.4.2 Electric Field due to a dipole 1.4.3 Torque experienced by an electric dipole in the uniform electric field 1.5 Electrostatic potential and potential energy 1.5.1 Electrostatic Potential energy & Electrostatic Potential 1.5.2 Electric Potential due to a point charge 1.5.3 Electrostatic Potential at a point due to an electric dipole 1.5.6 Electrostatic potential energy for collection of point charges 1.5.7 Electrostatic potential energy of a dipole in a uniform electric field 1.6 Gauss Law and its applications 1.6.1 Electric Flux 1.6.2 Electric flux for closed surfaces 1.6.3 Gauss Law 1.6.4 Applications of Gauss Law 1.8 Capacitor and Capacitance 1.8.1 Capacitors 1.8.2 Energy stored in the capacitor 1.8.3 Applications of capacitors |

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|----------|---|------------------------|---|
| November | 2 | 1. Electrostatics | 1.8.4 Effect of dielectrics in capacitors 1.8.5 Capacitors in series and parallel 1.9 Distribution of charges in a conductor and action at points 1.9.1 Distribution of charges in a conductor 1.9.2 Action at points or corona discharge 1.9.4 Vande graff Generator |
| | | 2. Current Electricity | Introduction 2.1 Electric Current 2.1.1 Conventional Current 2.1.2 Drift Velocity 2.1.3 Microscopic model of current 2.2 Ohm's Law 2.2.1 Resistivity 2.2.2 Resistors in Series and Parallel 2.2.3 Colour code for carbon resistors 2.2.4 Temperature dependence of resistivity 2.3 Energy and power in electrical circuits 2.4.1 Electromotive force and internal resistance 2.4.2 Determination of internal resistance 2.4.3 Cells in series 2.4.4 Cells in Parallel 2.5 Kirchhoff's rules 2.5.1 Kirchhoff's First rule 2.5.2 Kirchhoff's Second rule 2.5.3 Wheatstone's bridge 2.5.4 Meter bridge 2.5.7 Measurement of internal resistance of cell by Potentiometer 2.7 Thermo electric effect 2.7.1 Seebeck effect 2.7.2 Peltier Effect 2.7.3 Thomson effect |
| | | Practical | 1. Determine the value of the Horizontal component of the earth's magnetic field using tangent galvanometer. Take atleast four readings. 2. Compare the emf of two cells using potentiometer. |

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| December | 2 | <p>3. Magnetism and magnetic effects of electric current</p> | <p>3.1 Introduction</p> <p>3.1.2 Basic properties of magnets</p> <p>3.2 Coulomb's inverse square law of magnetism</p> <p>3.8 Biot - Savart law</p> <p>3.8.1 Definition and explanation of Biot - Savart law</p> <p>3.8.2 Magnetic field due to long straight conductor carrying current</p> <p>3.8.3 Magnetic field produced along the axis of the current carrying circular coil</p> <p>3.8.5 Current loop as a magnetic dipole</p> <p>3.9 Ampere Circuital law</p> <p>3.9.1 Ampere's circuital law</p> <p>3.9.2 Magnetic field due to the current carrying wire of infinite length using Ampere's law</p> <p>3.9.3 Magnetic field due to a long current carrying solenoid</p> <p>3.10 Lorentz force</p> <p>3.10.1 Force on a moving charge in a magnetic field</p> <p>3.10.2 Motion of a charged particle in a uniform magnetic field</p> <p>3.10.3 Motion of a charged particle under crossed electric and magnetic field (velocity selector)</p> <p>3.10.5 Force on a current carrying conductor placed in a magnetic field</p> <p>3.10.6 Force between two long parallel current carrying conductors</p> <p>3.11.2 Moving coil galvanometer</p> |
| | | | <p>4.1 Electromagnetic Induction</p> <p>4.1.1 Introduction</p> <p>4.1.2 Magnetic Flux (Φ_B)</p> <p>4.1.5 Fleming's right hand rule</p> <p>4.1.6 Motional emf from Lorentz force</p> <p>4.3 Self-Induction</p> <p>4.3.1 Introduction</p> <p>4.3.2 Self-inductance of a long solenoid</p> <p>4.3.3 Mutual Induction</p> <p>4.3.4 Mutual Inductance between two long co-axial solenoids</p> |

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| December | 2 | 4. Electro Magnetic Induction and Alternating current | <p>4.4 Methods of producing induced emf</p> <p>4.4.1 Introduction</p> <p>4.4.2 Production of induced emf by changing the magnetic field</p> <p>4.4.3 Production of induced emf by changing the area of the coil</p> <p>4.4.4 Production of induced emf by changing relative orientation of the coil with the magnetic field</p> <p>4.6 Transformer</p> <p>4.6.1 Construction and working of transformer</p> <p>4.6.2 Energy losses in Transformer</p> <p>4.6.3 Advantages of AC in long distance power transmission.</p> <p>4.7 Alternating Current</p> <p>4.7.1 Introduction</p> <p>4.7.1 Mean or Average value of AC</p> <p>4.7.2 RMS value of AC</p> <p>4.7.3 AC circuit containing pure resistor</p> <p>4.7.4 A Circuit containing pure inductor</p> <p>4.7.5 AC circuit containing only a capacitor</p> <p>4.7.6 AC circuit containing a resistor, an inductor and a capacitor in series - Series RLC circuit</p> <p>4.7.7 Resonance in series RLC circuit</p> <p>4.7.8 Q- factor</p> <p>4.8 Power in AC circuits</p> <p>4.8.1 Introduction of power in AC circuits</p> <p>4.8.2 Wattless current</p> <p>4.8.3 Power factor</p> <p>4.8.4 Advantages and disadvantages of AC over DC</p> <p>4.9 Oscillation in LC circuits</p> <p>4.9.1 Energy conversion during LC oscillations</p> <p>4.9.2 Conservation of energy in LC oscillations</p> |
| | | Practical | <p>3. Adjust the grating for normal incidence using the spectrometer. Determine the wavelength of green, blue, yellow and red lines of mercury spectrum(the number of lines per metre length of the grating can be noted from the grating).</p> |

SYLLABUS 2021-2022

STANDARD: 12

SUBJECT: CHEMISTRY

| MONTH | Number of Units | UNIT | TOPICS |
|----------|-----------------|---------------|---|
| November | 2 | 1. Metallurgy | Introduction 1.1 Occurrence of metals 1.1.1 Mineral and ore 1.2 Concentration of ores 1.2.1 Gravity separation or Hydraulic wash 1.2.2 Froth flotation 1.2.3 Leaching Cyanide leaching Recovery of metal of interest from the complex by reduction Ammonia leaching Alkali leaching Acid leaching 1.2.4 Magnetic separation 1.3 Extraction of crude metal 1.3.1 Conversion of ores into oxides Roasting Calcination 1.3.2 Reduction of metal oxides Smelting Reduction by carbon: Reduction by hydrogen Reduction by metal: Auto-reduction: 1.6 Refining process 1.6.1 Distillation 1.6.2 Liquation 1.6.3 Electrolytic refining 1.6.4 Zone Refining 1.6.5 Vapour phase method Mond process for refining nickel Van-Arkel method for refining zirconium/ titanium |
| | | Practical | Volumetric analysis 1. Estimation of Ferrous Sulphate (Permanganometry) |

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| November | | <p>6. Solid state</p> <p>Introduction</p> <p>6.1 General characteristics of solids</p> <p>6.2. Classification of Solids</p> <p>6.3. Classification of Crystalline Solids</p> <p>6.3.1. Ionic solids</p> <p>6.3.2. Covalent Solids</p> <p>6.3.3. Molecular Solids</p> <p>6.3.4. Metallic Solids</p> <p>6.4. Crystal lattice and unit cell</p> <p>6.5 Primitive and Non Primitive unit</p> <p>6.5.1 Primitive (or) Simple Cube unit cell</p> <p>6.5.2 Body Centered cubic unit cell</p> <p>6.5.3 Face centered cubic unit cell</p> <p>6.5.4 Calculations involving unit cell Dimensions</p> <p>6.5.5 Calculation of density</p> <p>6.6 Packing in Crystals</p> <p>6.6.1 Linear arrangement of spheres in one direction</p> <p>6.6.2 Two dimensional Close Packing</p> <p>6.6.3 Simple Cubic arrangement</p> <p>6.6.4. Body Centered Cubic arrangement</p> <p>6.7. Imperfections in solids</p> <p>6.7.1 Schottky defect</p> <p>6.7.2. Frenkel defect</p> <p>6.7.3. Metal Excess defect</p> <p>6.7.4. Metal Deficiency defect</p> <p>6.7.5. Impurity defect</p> |
| | Practical | <p style="text-align: center;">Volumetric analysis</p> <p>2. Estimation of FAS (Permanganometry)</p> |

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| December | 3 | 11. Hydroxy compounds and ethers | <p>Introduction</p> <p>11.1 Classification of Alcohols</p> <p>11.2 IUPAC Nomenclature</p> <p>Structure of functional group of alcohols</p> <p>Physical Properties of Alcohols</p> <p>Preparation of Alcohols</p> <p>Methods to differentiate primary, secondary, Tertiary</p> <p>Physical properties of alcohols</p> <p>Chemical Properties of Alcohols (without mechanism)</p> <p>Uses of Alcohols</p> <p>Acidity of alcohols</p> <p>Acidity of phenols</p> <p>Preparation of phenol</p> <p>Physical Properties of Phenol</p> <p>Chemical properties of phenols</p> <p>Test to differentiate Alcohols & Phenols</p> <p>Uses of phenol</p> <p>ETHERS</p> <p>Ethers Classification</p> <p>Structure of functional group</p> <p>IUPAC system</p> <p>Preparation of Ethers except mechanism</p> <p>Physical properties</p> <p>Chemical Properties of Ethers (except mechanism)</p> <p>Uses</p> |
| | | Practical | <p style="text-align: center;">Organic compounds</p> <p>1. Benzophenone</p> |

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|----------|--|------------------------|---|
| December | | 2. P-block elements -I | <p>Introduction</p> <p>2.1 General trends in properties of p-block elements</p> <p>2.1.1 Electronic configuration and oxidation state</p> <p>2.1.2 Metallic nature:</p> <p>2.1.3 Ionisation Enthalpy</p> <p>2.1.4 Electronegativity</p> <p>2.1.5 Anomalous properties of the first elements</p> <p>2.1.6 Inert pair effect</p> <p>2.1.7 Allotropism in p-block elements</p> <p>2.2 Group 13 (Boron group) elements</p> <p>2.2.1 Occurrence</p> <p>2.2.2 Physical properties</p> <p>2.2.3 Chemical properties of boron Uses of boron</p> <p>2.2.4 Borax [$\text{Na}_2\text{B}_4\text{O}_7 \cdot 10\text{H}_2\text{O}$] Preparation, Properties Uses of Borax</p> <p>2.2.5 Boric acid [H_3BO_3 or $\text{B}(\text{OH})_3$] Preparation, Properties Structure of Boric acid Uses of boric acid</p> <p>2.2.9 Alums Examples Preparation Properties of Alum Uses of Alum</p> <p>2.3 Group 14 (Carbon group) elements</p> <p>2.3.1 Occurrence</p> <p>2.3.2 Physical properties</p> <p>2.3.3 Tendency for catenation</p> <p>2.3.4 Allotropes of carbon Structure of Graphite Structure of Diamond Structure of Fullerenes Structure of carbon nanotubes Structure of Graphene</p> <p>2.3.8 Silicones Preparation, Types of silicones Properties, Uses</p> |
| | | Practicals | <p>Organic compounds</p> <p>1. Cinnamic acid</p> |

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|----------|--|----------------------|--|
| December | | 7. Chemical kinetics | <p>Introduction</p> <p>7.1 Rate of Chemical reaction</p> <p>7.1.1 Stoichiometry and rate of reaction</p> <p>7.1.2 Average and instantaneous rate</p> <p>7.3 Rate law and Rate Constant</p> <p>7.4 Molecularity</p> <p>7.5 Integrated Rate Equation</p> <p>7.5.1 Integrated rate law for First order, Pseudo first order reaction</p> <p>7.5.2 Integrated rate law for a Zero order reaction</p> <p>7.6 Half life period of a reaction</p> <p>7.8 Arrhenius Equation-The effect of temperature on reaction rate</p> |
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SYLLABUS 2021-2022

STANDARD: 12

SUBJECT: BOTANY

| MONTH | TOTAL CHAPTERS | CHAPTER | TOPICS |
|----------|----------------|---|--|
| November | 2 | CHAPTER: 1 Asexual and Sexual Reproduction in Plants | 1.1 Asexual reproduction 1.2 Vegetative Reproduction 1.2.1 Natural Methods 1.4 Pre-fertilization structure and events 1.4.1 Male reproductive part- Androecium 1.4.2 Female reproductive part- Gynoecium 1.4.3 Pollination 1.6 Post fertilization structure and events 1.7 Apomixis 1.8 Polyembryony 1.9 Parthenocarpy |
| | | CHAPTER: 2 Classical Genetics | 2.1 Heredity and variation 2.2 Mendelism 2.2.2 Mendel's experiments on pea plant 2.2.3 Terminology related to mendelism 2.3 Monohybrid cross 2.3.1 Mendel Analytical and empirical approach 2.3.2 Test cross 2.3.3 Back cross 2.3.4 Dihybrid cross 2.3.5 The Dihybrid test cross 2.4 Intragenic gene interactions 2.4.1 Incomplete dominance - No blending of genes 2.4.2 Codominance (1 : 2 : 1) 2.4.3 Lethal genes 2.4.4 Pleiotropy - A single gene affects multiple traits 2.5 Intergenic interactions |

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| November | 2 | Practical | <p>1. Ecological Adaptations Hydrophytes, Xerophytes, Halophytes and Epiphytes</p> <p>2. E.Coli cloning vector (pBR 322)</p> |
| December | 1 | CHAPTER: 3 Chromosomal Basis of Inheritance | <p>3.2 Linkage</p> <p>3.2.1 Coupling and repulsion theory</p> <p>3.2.2 Kinds of Linkage</p> <p>3.2.3 Linkage & Groups</p> <p>3.3.1 Mechanism of Crossing Over</p> <p>3.3.3 Recombination</p> <p>3.3.4 Genetic Mapping</p> <p>3.4 Multiple alleles</p> <p>3.4.1 Characteristic of multiple alleles</p> <p>3.4.2 Self-sterility in Nicotiana</p> <p>3.6 DNA Metabolism in plants</p> <p>3.6.1 Eukaryotic DNA replication</p> <p>3.6.2 Taylors experiment</p> <p>3.7 Protein synthesis in plants</p> <p>3.7.1 Transcription</p> <p>3.7.2 RNA splicing in plants</p> <p>3.7.3 Translation</p> <p>3.7.4 Alternative splicing in plants</p> <p>3.7.5 RNA Editing</p> <p>3.7.6 Jumping Genes</p> |
| | 2 | Practical | <p>3. To verify Monohybrid cross</p> <p>4. Analysis - Dihybrid Cross</p> |

SYLLABUS 2021-2022

STANDARD: 12

SUBJECT: ZOOLOGY

| MONTH | TOTAL NO. OF CHAPTERS | CHAPTER | TOPICS | PRACTICAL |
|----------|-----------------------|------------------------------|---|---|
| November | 2 | 1. Reproduction in Organisms | Introduction 1.1. Mode of Reproduction 1.3. Sexual reproduction | 1. Marking of wild life sanctuary and National parks in India Map 2. Human Mendelian traits |
| | | 2. Human Reproduction | Introduction 2.1. Human Reproductive system 2.2. Gametogenesis 2.5. Fertilization and Implantation 2.6. Maintenance of pregnancy and Embryonic development | |
| December | 2 | 3. Reproductive Health | Introduction 3.1. Need for reproductive Health problems and strategies 3.2. Amniocentesis and its statutory Ban 3.3. Social impact of sex ratio - female foeticide and infanticide 3.4. Population explosion and Birth control 3.8. Assisted Reproductive Technology(ART) 3.9. Detection of foetal disorders during early Pregnancy | |

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| | | 4. Principles of Inheritance and Variation | <p>Introduction</p> <p>4.1. Multiple alleles</p> <p>4.2. Human blood groups</p> <p>4.2.1 ABO blood types</p> <p>4.3. Genetic control of Rh factor</p> <p>4.3.1 Incompatibility of Rh Factor -Erythroblastosis foetalis</p> <p>4.4. Sex determination</p> <p>4.4.1 Genic balance in Drosophila</p> <p>4.4.2 Dosage compensation - Barrbody</p> <p>4.5. Sex linked inheritance</p> <p>4.5.1 Inheritance of X-linked genes</p> <p>4.5.2 Inheritance of Y-linked genes</p> <p>4.6. Karyotyping</p> <p>4.7. Pedigree analysis</p> <p>4.10. Extra chromosomal inheritance</p> <p>4.11. Eugenics, Euphenics and Euthenics</p> | <p>3. Human Sperm</p> <p>4. Human Ovum</p> <p>5. Paramecium - Conjugation</p> <p>6. Entamoeba histolytica</p> <p>7. Thymus T.S</p> <p>8. Lymph node</p> <p>9. Mutualism</p> <p>10. Commensalism</p> |
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SYLLABUS 2021-2022

STANDARD: 12

SUBJECT: BIO-BOTANY

| MONTH | TOTAL CHAPTERS | CHAPTER | TOPICS |
|----------|----------------|---|---|
| November | 2 | CHAPTER: 1 Asexual and Sexual Reproduction in Plants | 1.1 Asexual reproduction 1.2 Vegetative Reproduction 1.2.1 Natural Methods 1.4 Pre-fertilization structure and events 1.4.1 Male reproductive part- Androecium 1.4.2 Female reproductive part- Gynoecium 1.4.3 Pollination 1.6 Post fertilization and events 1.7 Apomixis 1.8 Polyembryony 1.9 Parthenocarpy |
| | | CHAPTER: 2 Classical Genetics | 2.1 Heredity and variation 2.2 Mendelism 2.2.3 Terminology related to Mendelism 2.3 Monohybrid cross 2.3.4 Dihybrid cross 2.3.5 The Dihybrid test cross |
| | | Practical | 1. E.Coli cloning vector (pBR 322) 2. Types of Ecological Pyramids - Number, Biomass, Energy |
| December | 1 | | 2.4 Intragenic interactions 2.4.1 Incomplete dominance - No blending of genes 2.4.2 Codominance (1 : 2 : 1) 2.4.3 Lethal genes 2.4.4 Pleiotropy - A single gene affects multiple traits 2.5 Intergenic interactions |

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|----------|--|--|
| December | Chapter: 3 Chromosomal Basis of Inheritance | 3.2 Linkage 3.2.1 Coupling and repulsion theory 3.2.2 kinds of Linkage 3.2.3 Linkage Groups 3.3 Crossing Over 3.3.1 Mechanism of Crossing Over 3.3.3 Importance of Crossing Over 3.3.4 Recombination 3.3.5 Genetic Mapping 3.4 Multiple alleles 3.5.1 Types of mutation 3.5.3 Chromosomal mutations |
| | Practical | 3. To verify Monohybrid cross 4. Analysis - Dihybrid Cross |

SYLLABUS 2021-2022

STANDARD: 12

SUBJECT: BIO-ZOOLOGY

| MONTH | TOTAL NO. OF CHAPTERS | CHAPTER | TOPICS | PRACTICALS |
|----------|-----------------------|-----------------------------|--|--|
| November | 2 | 1 Reproduction in Organisms | Introduction 1.1. Mode of Reproduction 1.3 Sexual reproduction | 1. Marking of wild life sanctuary and National parks in India Map 2. Human Mendelian traits |
| | | 2 Human Reproduction | Introduction 2.1. Human Reproductive system 2.2. Gametogenesis 2.4. Fertilization and Implantation 2.5 Maintenance of pregnancy and Embryonic development | |
| December | 2 | 3. Reproductive Health | Introduction 3.1. Need for reproductive Health problems and strategies 3.2. mniocentesis and its statutory Ban 3.3. Social impact of sex ratio - female foeticide and infanticide 3.4. Population explosion and Birth control 3.8. Assisted Reproductive Technology(ART) 3.9. Detection of foetal disorders during early Pregnancy | 3. Human Sperm 4. Human Ovum 5. Paramecium - Conjugation |

| | | | | |
|----------|--|---|---|---|
| December | | 4 Principles of Inheritance and Variation | <p>Introduction</p> <p>4.1. Multiple alleles</p> <p>4.2. Human blood groups</p> <p>4.2.1 ABO blood types</p> <p>4.3. Genetic control of Rh factor</p> <p>4.3.1 Incompatibility of Rh Factor - Erythroblastosis foetalis</p> <p>4.4. Sex determination</p> <p>4.4.1 Dosage compensation - Barr body</p> <p>4.5. Sex linked inheritance</p> <p>4.5.1 Inheritance of X-linked genes</p> <p>4.5.2 Inheritance of Y-linked genes</p> <p>4.6. Karyotyping</p> <p>4.7. Pedigree analysis</p> | <p>6. Entamoeba histolytica</p> <p>7. Thymus T.S</p> <p>8. Lymph node</p> |
|----------|--|---|---|---|

SYLLABUS 2021-2022

STANDARD: 12

SUBJECT: BIOCHEMISTRY

| MONTH | Total no. of units | UNIT | TOPICS | PRACTICALS |
|----------|--------------------|---|---|--|
| November | 2 | 1. Cell Membrane | Introduction 1.1 Chemical Composition 1.1.1 Lipid 1.1.2 Protein 1.1.2.1 Integral Protein 1.1.2.2 Peripheral Protein | 1. Determination of blood grouping |
| | | | 1.2 Models proposed for Membrane Structure 1.2.1 Monolayer Model 1.2.2 Lipid Bilayer Model 1.2.3 Sandwich Model 1.2.4 Unit Membrane Model 1.2.5 Fluid Mosaic Model | |
| | | 1.3 Membrane Transport 1.3.1 Passive Transport 1.3.2 Facilitated Diffusion 1.3.3 Active Transport 1.3.4 Endocytosis 1.4 Viscosity & Surface Tension 1.4.1 Biological importance of Viscosity and Surface tension 1.5 Osmosis 1.5.1 Biological significance 1.6 .1 Hemoglobin buffer system, Chloride shift | 2. Estimation of protein (BIURET METHOD) | |
| | | 2. Digestion | Introduction 2.2 Digestion 2.2.1 Mechanical Digestion | 3. Estimation of Glucose (Orthotoluidine method) |

| | | | | |
|----------|---|----------------------------|---|---|
| December | 1 | 2. Digestion | 2.2.2 Chemical Digestion 2.2.2.1 Digestion and absorption of Carbohydrates | |
| | | | 2.2.2.2 Digestion and absorption of Proteins 2.2.2.3 Digestion and absorption of Lipids 2.2.2.4 Digestion and absorption of Nucleic acids 2.3 Gastro Intestinal Hormones | 4. Estimation of Ascorbic acid (Vitamin C) |
| | | 3. Carbohydrate Metabolism | Introduction 3.1 Overview of metabolism 3.1.1 Catabolism and Metabolism 3.2 Carbohydrate as a source of energy 3.5 Hexose Monophosphate Shunt 3.5.1 Reaction of Oxidative Phase 3.5.2 Non Oxidative Phase | 5. Estimation of urea by Diacetyl Monoxime method |

SYLLABUS 2021-2022

STANDARD: 12

SUBJECT: MICROBIOLOGY

| MONTH | TOTAL No. OF UNTS | UNIT | CONTENT |
|----------|-------------------------|--------------------------------|---|
| November | 2 | 1 Developments in Microbiology | 1.1 Microbes in space 1.4 Nanoparticles production using microbes 1.5 Equipments 1.5.1 Confocal Microscopy 1.5.2 DNA sequencing system |
| | | 2. Microscopy | 2.1 Phase contrast Microscope 2.1.1 Principle 2.1.2 Optical components 2.1.3 Working mechanism 2.2 Fluorescence Microscope 2.2.1 Principle 2.2.2 Components of Fluorescence Microscope 2.2.3 Working Mechanism 2.3 Electron Microscope 2.3.1 Principle 2.3.2 Working principle and instrumentation of TEM 2.3.3 Working principle and instrumentation of SEM |

| | | | |
|----------|---|--|---|
| December | 2 | 3. Control of Microorganisms by chemical methods | 3.1 Disinfectants, Antiseptics and antibiotics 3.5 Evaluation of Antimicrobial chemical agents 3.6 Antibiotics 3.6.1 Mode of action of antibiotics 3.7 Antimicrobial susceptibility testing 3.8 Drug resistance mechanisms |
| | | 4. Microbial metabolism | 4.2 Energy of chemical reaction 4.2.1 High energy phosphate 4.2.2 Oxidation-Reduction reaction 4.6.1 Chemiosmotic mechanism of ATP 4.10.4 Enzyme regulation |
| | | Practical | <p style="text-align: center;"><u>Major practical</u></p> 1. Gram's staining of curd/idly batter/ yeast <p style="text-align: center;"><u>Slide</u></p> 10. Acid fast Bacilli |

SYLLABUS 2021-2022

STANDARD: 12

SUBJECT: GENERAL NURSING

| MONTH | Total no. of units | UNIT | TOPICS |
|----------|--------------------|--------------------------------|---|
| November | 1 | 1 Human Anatomy and Physiology | 1.1 Integumentary System Diseases related to Integumentary system 1.3 Musculo-Skeletal System 1.4 Muscular System Diseases related to the bones 1.5 Nervous System Diseases related to nervous system |
| | | Practical: | 1. Ryle's Tube Feeding |
| | | | 1.6 Gastrointestinal System Disease related to digestive system 1.7 Urinary System Disease related to urinary system 1.8 Respiratory System Disease of the respiratory tract 1.9 Endocrine System Diseases related to endocrine system |
| | | Practical: | 2. Instruments |

| | | | |
|----------|---|--|---|
| December | 1 | 2 Medical Surgical and Nursing Management of Human Diseasesy | Introduction 2.1 Infection and Infestation Scabies Psoriasis 2.2 Myocardial Infarction 2.3 Congestive Cardiac Failure 2.10 Gastric Ulcer 2.11 Duodenal Ulcer 2.14 Haemorrhoids (Piles) 2.15 Renal Failure 2.16 Renal Stone/Renal Calculi/ Urolithias |
| | | | 2.19 Diabetes Mellitus 2.20 Hypothyroidism 2.21 Hyperthyroidism 2.24 Menstrual Disorder 2.25 Uterine Prolapse 2.26 Benign Prostatic Hyperplasia 2.27 Hydrocele |

SYLLABUS 2021-2022

STANDARD: 12

SUBJECT: NUTRITION AND DIETETICS

| MONTH | Total No. of Units | UNIT | CONTENT |
|----------|--------------------|---|---|
| November | 2 | 1. Recommended Dietary Allowances And Meal Planning | 1.1 Dietary allowance recommended 1.1.1 Factors influencing RDA 1.2 Balanced diet 1.3 Meal planning 1.3.1 objectives of meal planning 1.3.2 Factors affecting Meal planning 1.6 low cost balanced diet |
| | | 2. Nutrition In Pregnancy, Lactation And Infancy | 2.1 Nutrition requirements in pregnancy 2.1.1 Weight gain during pregnancy 2.1.2 Effects of under nutrition in the mother 2.1.3 Effects of maternal nutrition on the fetus 2.1.4 Nutrition requirements during pregnancy 2.1.5 Dietary guidelines 2.1.6 Dietary problems 2.1.7 Practices incompatible with pregnancy 2.3 Growth and development during infancy 2.3.1 Nutritional requirements for infants 2.3.2 Breast feeding 2.3.3 Advantages of breast feeding. |
| | | Practical | Diet in Pregnancy |

| | | | |
|----------|---|--|---|
| December | 1 | 3. Nutrition During Pre School, School Age and Adolescence | <p>3.1 Preschool age.</p> <p>3.1.1 Nutritional requirement for Preschool Children</p> <p>3.1.2 Diet for preschool children.</p> <p>3.1.3 Common feeding problems in children.</p> <p>3.2.3 Nutritional problems in school aged children.</p> <p>3.2.4 Key points for good nutrition in school aged children.</p> <p>3.5 Adolescence</p> <p>3.5.1 Growth and development of adolescence.</p> <p>3.5.2 Physical, Physiological and Psychological changes in adolescents</p> <p>3.5.3 Nutritional requirements of adolescents.</p> <p>3.5.4 Nutritional Problems of adolescents.</p> <p>3.5.5 Nutrition and the menstrual cycle. .</p> |
| | | Practical | Diet for Infants (6-12 Months) |

SYLLABUS 2021-2022

STANDARD: 12

SUBJECT: HOME SCIENCE

| MONTH | Total No. of Unit | UNIT | TOPICS | PRACTICALS |
|----------|-------------------|--------------------------------------|--|---|
| November | 1 | 1. Therapeutic Diets | 1.1 Introduction 1.1.1 Objectives of diet therapy 1.1.2 Principles of Therapeutic Diet 1.1.3 Routine hospital diets 1.2. Diet in fever 1.2.1 Typhoid 1.2.2 Tuberculosis 1.4 Diet in diseases of liver Functions of Liver 1.4.1 Hepatitis 1.4.2 Cirrhosis 1.6 Diet for cardio vascular disease (Structure of the heart) 1.6.1 Cardiovascular diseases 1.6.2 Hypertension 1.8 Diet for kidney diseases Structure of nephron 1.8.1 Glomerulonephritis 1.8.2 Nephrosis 1.8.3 Kidney stones | - |
| December | 2 | 2. Consumer Protection and Education | 2.1 Introduction 2.4 Consumer aids 2.4.1 Label on products 2.4.2 Advertisements 2.4.3 Internet 2.4.4 Standardization marks | 3. Pickle preparation- Draw a food label with all the specifications |

| | | | |
|----------|--|---|---|
| December | | <p>2. Consumer Protection and Education</p> <p>2.5 Branding</p> <p>2.5.1 Elements of branding</p> <p>2.5.2 The types of brand</p> <p>2.6 Packaging</p> <p>2.6.1 Classification of packaging</p> <p>2.6.2 Types of packaging materials</p> <p>2.7 Consumer education</p> <p>2.7.1 Role of consumer education</p> <p>2.7.2 Rights of consumer</p> <p>2.7.3 Consumer protection Act 1986 (COPRA)</p> <p>2.7.4 Consumer Redressal Forum</p> | - |
| | | <p>3. Food Safety</p> <p>3.1 Introduction</p> <p>3.2 Selection of food</p> <p>3.3 Storage of foods</p> <p>3.5 Food Hygiene</p> <p>3.5.1 Contamination of Food</p> <p>3.6 Food borne Diseases</p> <p>3.6.1 Classification of food borne illnesses</p> <p>3.7 HACCP - Method to prevent food borne illness</p> | - |

SYLLABUS 2021-2022

STANDARD: 12

SUBJECT: COMPUTER SCIENCE

| MONTH | Total no. of units | UNIT | TOPICS | PRACTICALS |
|----------|--------------------|-------------------------------------|--|--|
| November | 2 | 1. Function | 1.1 Introduction 1.2 Function with respect to Programming language | 1. PY1 (a) Calculate Factorial PY1(b) Sum of Series |
| | | 2. Data Abstraction | 2.1 Data Abstraction - Introduction 2.2 Abstract Data Types 2.3 Constructors and Selectors | |
| December | 3 | 3. Scoping | 3.1 Introduction 3.2 Variable Scope 3.3 LEGB rule 3.4 Types of Variable Scope | 2. PY2 (a) Odd or Even PY2 (b) Reverse the String 3. PY3 Generate values and remove odd numbers |
| | | 4. Algorithmic Strategies | 4.1 Introduction to Algorithmic strategies 4.4 Algorithm for Searching Techniques 4.5 Sorting Techniques | |
| | | 5. Python - Variables and Operators | 5.1 Introduction 5.2 Key features of Python 5.3 Programming in Python 5.4 Input and Output functions 5.5 Comments in Python 5.6 Indentation 5.7 Tokens | |

SYLLABUS 2021-2022

STANDARD: 12

SUBJECT: COMMERCE

| MONTH | TOTAL NO. OF UNITS | UNIT | CONTENT |
|----------|--------------------|---------------------------------------|--|
| NOVEMBER | 3 | UNIT-I 1. Principles of Management | Entire Chapter |
| | | 2. Functions of Management | Entire Chapter |
| | | UNIT-II 4. Financial Market | Entire Chapter |
| DECEMBER | 3 | 5. Capital Market | 5.01 Meaning and Definition of capital Market 5.02 Characteristics of Capital Market 5.03 Kinds of Capital Market |
| | | UNIT-III 6. Money Market | Entire Chapter |
| | | UNIT-III 7. Stock Exchange | 7.01 Origin, Meaning, Definition of Stock Exchange 7.02 Function of stock exchange 7.03 Features of Stock Exchange 7.04 Benefits & Limitations 7.05 Stock Exchange in India 7.06 Types of Speculators |

SYLLABUS 2021-2022

STANDARD: 12

SUBJECT: ACCOUNTANCY

| MONTH | Total no. of units | UNIT | CONTENT |
|----------|--------------------|-------------------------------------|---|
| November | 1 | 1. Accounts from Incomplete Records | 1.1 Introduction 1.2 Meaning of incomplete records 1.3 Features of incomplete records 1.4 Limitations of incomplete Records 1.5 Difference between double entry system and incomplete records 1.7 Ascertaining profit or loss from incomplete records through statement of affairs 1.7.1 Calculation of Profit or loss through statement of affairs 1.7.2 Steps to be followed to fine out the profit or loss by preparing statement of affairs 1.7.3 Statement of affairs 1.7.4 Format of statement of affairs 1.7.5 Difference between statement of affairs and balance sheet 1.8 Preparation of final accounts from incomplete records 1.8.1 Steps to be followed to prepare final accounts from incomplete records 1.8.1 (i) Format of total debtors account (ii) Format of Bills Receivables account (iii) Format of total creditors account (iv) Format of Bill Payable account |

| | | | |
|----------|---|---|--|
| December | 2 | 2. Accounts of Not - For - Profit Organisation | <ul style="list-style-type: none"> 2.1 Introduction 2.2 Features of not for profit organisation 2.3 Receipts and Payments Accounts <ul style="list-style-type: none"> 2.3.1 Steps in preparation of receipts and payment account 2.4 Items peculiar to not for profit organisation 2.5 Income and expenditure account <ul style="list-style-type: none"> 2.5.1 Steps in preparation of income and expenditure Account 2.5.2 Format of income and expenditure account 2.5.3 Difference between receipts and payments account and income and expenditure account 2.5.4 Treatment of Revenue Receipts |
| | | 3. Accounts of Partnership Firms - Fundamentals | <ul style="list-style-type: none"> 3.1 Introduction 3.2 Meaning, definition and features of partnership <ul style="list-style-type: none"> 3.2.1 Meaning and Definition of partnership 3.2.2 Features of partnership 3.3 Partnership Deed <ul style="list-style-type: none"> 3.3.1 Contents of Partnership Deed 3.4 Application of the Provision of the Indian Partnership Act 1932 in the absence of Partnership Deed <ul style="list-style-type: none"> 3.6.3 Difference between Fixed Capital Method and Fluctuating Capital Method 3.7 Interest on Capital and Interest on Drawings of partners |

| | | | |
|--|--|--|---|
| | | <p>3. Accounts of Partnership Firms - Fundamentals</p> | <p>3.7.1 Interest on Capital 3.7.2 Calculation Interest on Capital 3.7.3 Interest on Drawings 3.7.4 Calculation Interest on Drawings 3.8 Salary and Commission to Partnership</p> |
|--|--|--|---|

SYLLABUS 2021-2022

STANDARD: 12

SUBJECT: ECONOMICS

| MONTH | Total no. of units | UNIT | TOPICS |
|----------|--------------------|--------------------------------------|---|
| November | 2 | 1. Introduction to Macro Economics | 1.1 Introduction to Macro Economics 1.2 Meaning of macro economics 1.3 Importance of macro economics 1.7 Economic Systems 1.7.1 Capitalist economy 1.7.2 Socialistic Economy (Socialism) 1.7.3 Mixed Economy 1.9 Circular flow of income 1.9.1 Circular Flow of Income in a Two-Sector Economy: 1.9.2 Circular Flow of Income in a Three-Sector Economy: 1.9.3 Circular flow of income in a four sector economy |
| | | 2. National Income | 2.1 National Income -Introduction 2.2 Meaning of National Income 2.4.1 Gross Domestic Product (GDP) 2.4.2 Gross National Product (GNP) 2.4.7 Per capita Income 2.4.8 Real Income 2.4.9 GDP deflator 2.5 Methods of Measuring National Income 2.5.1 Product Method (Value Added) 2.5.2 Income Method 2.5.3 Expenditure Method |
| December | 2 | 3. Theories of Employment and Income | 3.1 Theories of Employment and Income Introduction 3.2 Meaning of Full Employment 3.3 Unemployment and its types 3.4.1 Say's Law of Market 3.6 Effective demand 3.6.1 Aggregate Demand Function (ADF) 3.6.2 Aggregate Supply Function (ASF) |

| | | | |
|----------|--|---|--|
| December | | 4. Consumption and investment functions | 4.1 Introduction 4.2 Consumption Function 4.2.1 Meaning of Consumption function 4.2.2 Technical Attributes of the Consumption function 4.3 Investment Function 4.3.1 Meaning of investment 4.3.2 Types of investment 4.3.3 Determinants of Investment Function 4.3.4 Relationship between the rate of Interest and investment 4.3.5 Marginal Efficiency of Capital. 4.3.6 Marginal Efficiency of Investment(MEI) 4.4 Multiplier 4.4.1 Assumptions of Multiplier 4.4.2 Marginal propensity to consume and multiplier. 4.4.4 Classification of Multiplier 4.4.6 Uses of multiplier 4.5 The Accelerator Principle 4.5.1 Meaning 4.5.2 Definition 4.5.3 Assumptions 4.5.4 Operation of the Acceleration Principle 4.5.5 Limitations |
|----------|--|---|--|

SYLLABUS 2021-2022

STANDARD: 12

SUBJECT: HISTORY

| MONTH | Total no. of units | UNIT | TOPICS |
|----------|--------------------|---|-------------|
| November | 3 | 1. Rise of Nationalism in India | Entire Unit |
| | | 2. Rise of Extremism and Swadeshi Movement | Entire Unit |
| | | 3. Impact of World War-I on Indian Freedom Movement | Entire Unit |
| December | 2 | 4. Advent of Gandhi and Mass Mobilisation | Entire Unit |
| | | 5. Period of Radicalism in Anti-imperialist Struggles | Entire Unit |

SYLLABUS 2021-2022

STANDARD: 12

SUBJECT: POLITICAL SCIENCE

| MONTH | Total No. of Units | UNIT | CONTENT |
|----------|--------------------|--------------------------|-------------|
| November | 2 | 1. Constitution of India | Entire unit |
| | | 2. Legislature | Entire unit |
| December | 2 | 3. Executive | Entire unit |
| | | 4. Indian Judiciary | Entire unit |

SYLLABUS 2021-2022

STANDARD: 12

SUBJECT: GEOGRAPHY

| MONTH | Total No. of Units | UNIT | TOPICS |
|----------|--------------------|-------------------------|---|
| November | 2 | 1. Population Geography | 1.1 Introduction 1.3 Density of Population 1.4 Growth of world population 1.5 Composition of Population |
| | | 2. Human Settlements | 2.1 Introduction 2.2 Origin and development of Settlement 2.3 Site and Situation 2.4 Pattern of Rural Settlement 2.6 Urban Settlement 2.7 The concentric zone theory 2.9 Issues of Urbanization |
| December | 2 | 3. Resources | 3.3 Mineral resources 3.4 The world distribution of minerals 3.5 Energy Resources |
| | | 4. Economic Activities | 4.1 Introduction 4.2 Primary activities 4.3 Secondary activities 4.5 Division of the world on the basis of Economic Activities |

SYLLABUS 2021-2022

STANDARD: 12

SUBJECT: STATISTICS

| MONTH | Total No. Of Unit | UNIT | CONTENT |
|----------|-------------------|---|--|
| November | 1 | 1. Test of Significance - Basic Concepts and Large Sample Tests | 1.1. Parameter and Statistic 1.2. Sampling Distribution 1.3. Standard Error 1.4. Null Hypothesis and Alternative Hypothesis 1.5. Errors in Statistical Hypothesis Testing 1.6. Level of Significance, Critical Region and Critical value(s) 1.7. One -Tailed and Two-Tailed tests |
| | | | 1.8. General Procedure for Test of Hypothesis 1.9. Test of Hypothesis for Population mean (Population variances are known) 1.10. Test of Hypothesis for Population mean (Population variances are Unknown) 1.13. Test of Hypothesis for Population proportion |
| | | Practical | Lesson - 1 1.9, 1.10, 1.13 |
| December | 2 | 2. Tests Based on Sampling Distribution-I | Introduction 2.1 Students t-distribution and its Application 2.1.1. Students t-distribution 2.1.2. Properties of the Students t-distribution 2.1.3. Application of t-distribution 2.1.4. Test of Hypothesis for normal population mean (Population variance unknown) 2.1.6 Paired t-test |

| | | | |
|----------|--|--|---|
| December | | 2. Tests Based on Sampling Distribution-I | <p>2.2. Chi-Square Distribution & Its Application</p> <p>2.2.1. Chi-Square Distribution</p> <p>2.2.2. Properties of Chi-Square Distribution</p> <p>2.2.3. Applications of Chi-Square Distribution</p> <p>2.2.4. Test of Hypothesis for Population variance of the normal population (Population mean is assumed to be unknown) Chi Square Distribution</p> <p>2.2.5. Independence of attributes</p> |
| | | Practical | <p>Lesson - 2</p> <p>2.1.4, 2.1.6, 2.2.4, 2.2.5</p> |
| | | 3. Tests Based on Sampling Distribution-II | <p>Introduction</p> <p>3.1 F-Distribution and its Applications</p> <p>3.3 ANOVA</p> <p>3.3.1 One way ANOVA</p> <p>3.3.2 Test Procedure</p> <p>3.3.3 Merits and Demerits of one way ANOVA</p> |
| | | Practical | <p>Lesson - 3</p> <p>3.3.2</p> |

SYLLABUS 2021-2022

STANDARD: 12

SUBJECT: BUSINESS MATHEMATICS & STATISTICS

| MONTH | Total No. Of Unit | UNIT | TOPICS |
|----------|-------------------|--|---|
| November | 2 | 1. Applications of Matrices and Determinants | 1.1 Rank of a Matrix 1.1.1 Concept 1.1.2 Elementary Transformations and Equivalent matrices 1.1.3 Echelon form and finding the rank of the matrix (up to the order of 3×4) 1.1.4 Testing the consistency of non-homogeneous linear equations (two and three variables) by rank method. 1.3 Transition Probability Matrices 1.3.1 Forecasting the succeeding state when the initial market share is given |
| | | 2. Integral Calculus - I | 2.1 Indefinite Integrals 2.1.1 Concept of Indefinite Integral 2.1.2 Two important properties of Integral Calculus 2.1.3 Integration by decomposition 2.1.4 Integration by parts 2.2 Definite integrals 2.2.1 The fundamental theorems of Integral Calculus 2.2.2 Properties of definite integrals |
| December | 1 | 3. Integral Calculus - II | 3.1 The area of the region bounded by the curves 3.1.1 Geometrical Interpretation of Definite Integral as Area under a curve 3.2 Application of Integration in Economics and Commerce. 3.2.1 Cost functions from marginal cost functions and demand functions 3.2.2 Revenue functions from Marginal revenue functions 3.2.3 The demand functions from elasticity of demand 3.2.4 Consumer's surplus 3.2.5 Producer surplus |

பாடத்திட்டம் 2021 – 2022

வகுப்பு: 12

பாடம்: சிறப்புத் தமிழ்

| மாதம் | மொத்த இயல்கள் | இயல் | தலைப்பு |
|----------|---------------|---------------|--|
| நவம்பர் | 1 | 1. கவிதையியல் | கவிதையியல் |
| | | | செவ்வியல் இலக்கியங்கள் அறவியல் இலக்கியங்கள் காப்பியங்கள் சமய இலக்கியங்கள் |
| டிசம்பர் | 1 | 2. கதையியல் | புனை கதை இலக்கியம் – ஓர் அறிமுகம் புதினம் எழுதும் கலை புதினம் (பகுதி) – சாயாவனம் உலக மொழிப் புதினம் –தாய் |

SYLLABUS 2021-2022

STANDARD: 12

SUBJECT: COMMUNICATIVE ENGLISH

| MONTH | TOTAL No. OF UNITS | UNIT | THEORY | PRACTICAL |
|----------|--------------------------|---------------------------------|---|---|
| November | 1 | 1. In Harmony with the World | Positive Thinking (Prose) Be A Friend (Poem) | |
| | | | Question Tags Debate Letter to the Editor | Speaking Skill: Debate |
| December | 1 | 2. Improve Your Connectivity | Frankness matters (Prose) The Builders (Poem) Language Study (Specialists/ Foreign Words/ Legal Terms) | |
| | | | LANGUAGE STUDY (Field of Education) Role Play Job Application | Speaking Skill: Role Play/ Interview Writing Skill: Sample Job Application |

பாடத்திட்டம் 2021 – 2022

வகுப்பு : 12

பாடம்: அறவியலும் இந்தியப் பண்பாடும்

| மாதம் | மொத்த அலகுகள் | அலகு | பாடப்பொருள் |
|----------|---------------|-----------------------------------|---|
| நவம்பர் | 1 | 1. இந்தியப் பண்பாட்டின் இயல்புகள் | <p>நுழைவு வாயில் பண்பாடு – சொல் விளக்கம் பண்பாடு பற்றிய அறிஞர்களின் வரையறை இந்தியப் பண்பாட்டை அறிய உதவும் தொன்மைச் சான்றுகள் இலக்கியச் சான்றுகள் புராணங்கள் இந்தியப் பண்பாட்டின் இயல்புகள் இந்தியப் பண்பாட்டின் சிறப்புக்கூறுகள் அழிவில்லா மதிப்பீடுகளின் நிலை பண்பாடும் நாகரிகமும் வேற்றுமையில் ஒற்றுமை பண்பாட்டுக் கல்வியின் பயன்கள் நிறைவுரை</p> |
| டிசம்பர் | 2 | 2. வேற்றுமையில் ஒற்றுமை | <p>நுழைவு வாயில் வேற்றுமையில் ஒற்றுமை – வரையறை வேற்றுமைக் கூறுகள் ஒற்றுமைக் கூறுகள் இலக்கியம் பண்பாட்டில் ஒற்றுமை பழக்க வழக்கங்கள் மற்றும் பாரம்பரியம் மொழி ஒற்றுமை திராவிட மொழிக் குடும்பம் இலக்கிய ஒற்றுமை உடல் அமைப்பில் ஒற்றுமை சமுதாய அமைப்பில் ஒற்றுமை இந்தியப் பண்பாட்டு ஒற்றுமையை வளர்க்க துணைபுரியும் காரணிகள் பண்பாட்டு ஒற்றுமையைப் பேணிக்காத்தல் தேசிய சின்னங்கள் தேசிய திருவிழாக்கள் நிறைவுரை</p> |

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| டிசம்பர் | | 3. வேதகாலப் பண்பாடு | பாடம் முழுவதும் |
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SYLLABUS 2021-2022

STANDARD: 12

SUBJECT: COMPUTER APPLICATION

| MONTH | Total no. of units | UNIT | TOPICS | PRACTICALS |
|----------|--------------------|---|--|---------------------------------------|
| November | 3 | 1. Multimedia and Desktop Publishing | 1.1 Introduction to Multimedia 1.4 File format of Multimedia 1.5 Multimedia production 1.8 Libraries, Information Centers, Archives | CA2 - Pagemaker creating notice board |
| | | 2. An Introduction to adobe Pagemaker | 2.2 Introduction to Adobe Pagemaker 2.7 Text Block 2.8 Understanding Story 2.9 Threading text block 2.10 Placing text in a frame 2.16 Magnifying and Reducing with the Zoom tool 2.17 Formatting a document 2.18 Drawing 2.19 Working with pages 2.20 Master Pages 2.21 Print a Document | CA4 - Pagemaker creating notice board |
| | | 3. Introduction to Database Management System | 3.1 Introduction to DBMS 3.3 RDBMS 3.4 RDBMS jargons 3.5 ER model 3.6 ER Diagram 3.7 Introduction to MYSQL | |

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| December | 3 | 4. Introduction to Hypertext Pre Processor | 4.1 Introduction to PHP 4.3 Client server Architecture 4.6 Web development concept | |
| | | 5. PHP Function and Array | 5.1 Parameterized function 5.2 Array in PHP | CA5 - MySQL usage of commands in DB |
| | | 6. PHP Conditional Statements | If else statement in PHP If elseif else statement in PHP Switch case | CA6 - PHB basic programming |