To prepare for the exam, candidates must have in-depth knowledge of the SRMJEEE syllabus. Here we have provided the pdf file for the SRMJEEE syllabus. Candidates can refer them and prepare in a proper manner.

SRMJEEE 2021 Syllabus for Physics (35 Questions)

The SRMJEEE 2021 Physics Syllabus includes a total of ten (10) units and their sub-topics. Candidates can refer to each of the units and prepare accordingly. To prepare for the exam, candidates should also practice previous year paper of SRMJEEE. In this way, they will get an idea of what type of questions are being asked in recent years and they will be aware that how many questions are there from the SRMJEEE syllabus 2021.

UNIT 1: Units and Measurement

- Units for measurement, the system of units-S.I., fundamental and derived units, measurements-errors in measurement-significant figures, dimensions-dimensional analysis-applications.

UNIT 2: Mechanics

- Motion in one dimension-uniform and non-uniform motion uniformly accelerated motion-scalar and vector quantities-Newton's laws of motion force and inertia-impulse and momentum-law of conservation of linear momentum-applications-motions in two dimension-projectile motion-uniform circular motion-friction-laws of friction-applications- centripetal force-centre of mass-torque-angular momentum and its conservation-moment of inertia-theorems of the moment of inertia-work-energy-potential energy and kinetic energy-power-collision-elastic and inelastic collisions.

UNIT 3: Gravitation, Mechanics of Solids and Fluids

- The universal law of gravitation, the acceleration due to gravity-variation of 'g' with altitude, latitude, and depth-gravitation potential-escape velocity and orbital velocity geostationary satellites-Kepler's laws of planetary motion. Solids-elastic behaviour, stress-strain-Hooke's law-Moduli of elasticity-relation between them-surface tension capillarity-applications-viscosity-Poiseuille's formula-Stokes law-applications-streamline and turbulent flow-Reynolds number-Bernoulli's theorem- applications.

UNIT 4: Oscillations and Wave Motion

- Periodic motion-simple harmonic motion equations of motion-oscillations of spring-simple pendulum-free forced and damped oscillations-resonance-applications-wave motions-longitudinal and transverse waves-velocity of wave motion in different media-Newton's formula-Laplace's correction-super position of waves-progressive and standing waves-sonometer-air columns-Doppler effect and its applications.

UNIT 5: Heat and Thermodynamics

- Kinetic theory of gases-postulates-pressure of a gas-specific heat capacity-relation between Cp and Cv-rst law of thermodynamics thermodynamical processes-isothermal and adiabatic-reversible and irreversible process-second law of thermodynamics-Carnot's

engine-Heat transfer-conduction convection-radiation-thermal conductivity of solids-black body radiations-Kirchoff's law-Wien's displacement law-Stefan's law newton's law of cooling.

UNIT 6: Ray and Wave Optics and Magnetism

- Reflection and refraction of light total internal reaction velocity of light determination-deviation and dispersion of light by a prism-Lens formula-magnification-power of lens combination of thin lenses in contact-Microscope- Astronomical telescope-wavefront-Huygens principle-wave nature of light-interference-Young's double-slit experiment diffraction and polarisation.

UNIT 7: Electricity and Magnetism

- Electrostatics-Coulomb's inverse square law-dielectric constant-electric eld-electric lines of force-electric dipole-electric potential-potential difference-electric flux-Gauss theorem-electrostatic induction-capacitor capacitors in parallel and series-action of points-lightning arrester electric current-drift velocity of electrons-Ohm's law-electrical resistivity and conductivity-super conductivity-Kirchoff's law-Wheatstone's bridge-principle of potentiometer-electric power earth's magnetic eld and magnetic elements-magnetic held due to a magnetic dipole-torque on a magnetic dipole-tangent law tangent galvanometer-deflection magnetometer-magnetic properties
of a material-dia, para and ferromagnetic materials-applications.magnetic effects of electric current-Bio Savart law-force on a moving charge in a uniform magnetic eld-moving coil galvanometer-conversion of a galvanometer into voltmeter and ammeter-Faraday's law-Lenz law of electromagnetic induction-Self inductance-mutual inductance-Flemming's right-hand rule-methods of inducing an emf-eddy current. Alternating currents-LCR series circuit-AC generator-Transformer.

UNIT 8: Atomic Physics and Relativity

- Atomic structure-properties of cathode rays and positive rays-specific charge of an electron-atom model-Thomson atom model-Rutherford atom model-Bohr atom model-merits and demerits-quantum numbers-X-rays-production-properties-Bragg's law-Bragg' X-ray spectrometer-Photoelectric effect-laser-spontaneous and stimulated emission-laser action characteristics of laser light-ruby laser applications of laser relativity einstein's mass-energy relation-variation of mass with velocity.

UNIT 9: Dual Nature of Matter and Nuclear Physics

- Matter waves-wave nature of particles-De Broglie wavelength- electron microscope. Nuclear properties; radius, mass, binding energy, density, isotopes, mass defect-Bainbridge mass spectrometer-nuclear forces neutron discovery-radioactivity - α, β and γ decay half-life and mean life-artificial radio activity-radio isotopes-radio carbon dating-radiation hazards. Nuclear fission-nuclear reactor-nuclear fusion hydrogen bomb cosmic rays-elementary particles.

UNIT 10: Electronics and Communication

- Semiconductors-doping-types-PN junction diode-biasing-diode as a Rectifier-transistors-transistor characteristics-amplifier-gain-feedback in amplifiers-logic gates-basic logic gates-NOT, OR, AND, NOR, NAND-universal gates-De Morgan's

theorems-space communication propagation of electromagnetic waves in atmosphere-sky and space wave propagation-modulation types–demodulation-microwaves-radars.

SRMJEEE 2021 Syllabus for Chemistry (35 Questions)

SRMJEEE 2021 syllabus for chemistry is discussed below. Candidates can refer to these topics while preparing for the chemistry section. A total of 19 units are there in this section. The concepts of physical chemistry, organic and inorganic chemistry are included in the SRMJEEE syllabus 2021.

UNIT 1: Some Basic Concepts in Chemistry

● Matter and its nature, Dalton's atomic theory; the concept of the atom, molecule, element, and compound; Physical quantities and their measurements in Chemistry, precision, and accuracy, significant figures, S.I. Units, dimensional analysis; Laws of chemical combination; atomic and molecular masses, mole concept, molar mass, percentage composition, empirical and molecular formulae; Chemical equations and stoichiometry.

UNIT 2: States of Matter

● Classification of matter into solid, liquid and gaseous states. Solid State: Classification of solids: molecular, ionic, covalent and metallic solids, amorphous and crystalline solids (elementary idea); Bragg's Law and its applications; Unit cell and lattices, packing in solids (fcc, bcc and hcp lattices), voids, calculations involving unit cell parameters, an imperfection in solids; Electrical, magnetic and dielectric properties. Liquid State: Properties of liquids - vapour pressure, viscosity and surface tension and effect of temperature on them (qualitative treatment only). Gaseous State: Measurable properties of gases; Gas laws-Boyle's law, Charle's law, Graham's law of diffusion, Avogadro's law, Dalton's law of partial pressure; Concept of Absolute scale of temperature; Ideal gas equation, Kinetic theory of gases (only postulates); Concept of average, root mean square and most probable velocities; real gases, deviation from ideal behaviour, compressibility factor, Vander Waals equation, liquefaction of gases, critical constants.

UNIT 3: Chemical Families - Periodic Properties

● Modern periodic law and present form of the periodic table, s&p block elements, periodic trends in properties of elements, atomic and ionic radii, ionisation enthalpy, electron gain enthalpy, valence, oxidation states, and chemical reactivity. Transition elements-d-block elements, inner transition elements-f-block elements. Ionisation energy, lanthanides, and actinides-general characteristics. Coordination Chemistry: Coordination compounds, nomenclature: terminology - Werner's coordination theory. Applications of coordination compounds.

UNIT 4: Atomic Structure

● Discovery of subatomic particles (electron, proton and neutron); Thomson and Rutherford atomic models and their limitations; Nature of electromagnetic radiation, photoelectric effect; Spectrum of the hydrogen atom, Bohr model of hydrogen atom-its postulates, derivation of the relations for the energy of the electron and radii of the different orbits, limitations of Bohr's model; Dual nature of matter, De-Broglie's relationship, Heisenberg uncertainty principle. Elementary ideas of quantum mechanics, a quantum mechanical model of the

atom, its important features, various quantum numbers (principal, angular momentum and magnetic quantum numbers) and their significance; shapes of s, p and d-orbitals, electron spin and spin quantum number; rules for filling electrons in orbitals–Aufbau principle, Pauli's exclusion principle and Hund's rule, electronic configuration of elements, extra stability of half-filled and filled orbitals.

UNIT 5: Chemical Bonding and Molecular Structure

- Covalent Bonding: Concept of electronegativity, Fajan's rule, dipole moment; Valence Shell Electron Pair Repulsion (VSEPR) theory and shapes of simple molecules.
  Quantum mechanical approach to covalent bonding: Valence bond theory - Its important features, the concept of hybridization involving s, p, and d orbitals; resonance.
  Molecular orbital theory - Its important features, LCAOs, types of molecular orbitals (bonding, antibonding), sigma and pi-bonds, molecular orbital electronic configurations of homonuclear diatomic molecules, the concept of bond order, bond length and bond energy.
  Elementary idea of metallic bonding. Hydrogen bonding and its applications.
  Extractive metallurgy of sodium, lithium, properties of alkali metals, Basic nature of oxides and hydroxides, compounds of alkaline earth metals, compounds of boron.
  Oxides, carbides, halides, and sulphides of the carbon group. Oxides-classification-acidic, basic, neutral, peroxide and amphoteric oxides.

UNIT 6: Chemical Energetics

- The first law of thermodynamics, energy changes during a chemical reaction, internal energy and enthalpy, Hess's law of constant heat summation, numerically based on these concepts. Enthalpies of reactions (enthalpy of neutralisation, enthalpy of combustion, enthalpy of fusion and vaporisation).

UNIT 7: Chemical Thermodynamics

- The second law of thermodynamics - Spontaneity of processes; ΔS of the universe and ΔG of the system as criteria for spontaneity, ΔGo (Standard Gibbs energy change) and equilibrium constant.

UNIT 8: Solutions

- Different methods for expressing the concentration of solution-Molality, molarity, mole fraction, percentage (by volume and mass both), the vapour pressure of solutions and Raoult's law-ideal and non-ideal solutions, vapour pressure-composition plots for ideal and non-ideal solutions; Colligative properties of dilute solutions-relative lowering of vapour pressure, depression of freezing point, the elevation of boiling point and osmotic pressure; Determination of molecular mass using colligative properties; Abnormal value of molar mass, Vant Hoff factor and its significance.

UNIT 9: Chemical Equilibrium

- The meaning of equilibrium, the concept of dynamic equilibrium. Equilibria involving physical processes: Solid-liquid, liquid-gas and solid-gas equilibria, Henry's law, Equilibria involving chemical processes: Law of chemical equilibrium, equilibrium constants (Kp and Kc) and their significance, the significance of,1G and,1Go in chemical equilibria, factors affecting equilibrium concentration, pressure, temperature, the effect of catalyst; Le

Chatelier's principle. Ionic equilibrium: Weak and strong electrolytes, ionization of electrolytes, various concepts of acids and bases (Arrhenius, Bronsted-Lowry and Lewis) and their ionization, acid-base equilibria (including multistage ionization) and ionization constants, ionization of water, pH scale, common ion effect, hydrolysis of salts and pH of their solutions, the solubility of sparingly soluble salts and solubility products, buffer solutions.

UNIT 10: Electrochemistry

- Electrolytic and metallic conduction, conductance in electrolytic solutions, specific and molar conductivities and their variation with concentration: Kohlrausch's law and its applications. Electrochemical cells-Electrolytic and Galvanic cells, different types of electrodes, electrode potentials including standard electrode potential, half-cell and cell reactions, emf of a Galvanic cell and its measurement; Nernst equation and its applications; Dry cell and lead accumulator; Fuel cells; Corrosion and its prevention.

UNIT 11: Surface Chemistry, Chemical Kinetics, and Catalysis

- Adsorption-Physisorption and chemisorption and their characteristics, factors affecting the adsorption of gases on solids-Freundlich and Langmuir adsorption isotherms, adsorption from solutions. Catalysis-Homogeneous and heterogeneous, activity and selectivity of solid catalysts, enzyme catalysis, and its mechanism.
Colloidal state-Distinction among true solutions, colloids, and suspensions, classification of colloids-lyophilic, lyophobic; multi molecular, macromolecular and associated colloids (micelles), preparation and properties of colloids-Tyndall effect, Brownian movement, electrophoresis, dialysis, coagulation, and occultation; Emulsions and their characteristics. The rate of reaction, the instantaneous rate of reaction and order of the reaction. Factors affecting rates of reactions - factors affecting the rate of collisions encountered between the reactant molecules, the effect of temperature on the reaction rate, the concept of activation energy, catalyst. Rate law expression. Order of a reaction (with suitable examples). Units of rates and specific rate constants. Order of reaction and effect of concentration (study will be conned to rst order only). Theories of catalysis adsorption theory some of the important industrial processes using catalysts. Nuclear Chemistry: Radioactivity: isotopes and isobars: Properties of α, β and γ rays; Kinetics of radioactive decay (decay series excluded), carbon dating; Stability of nuclei concerning proton-neutron ratio; Brief discussion on fission and fusion reactions.

UNIT 12: Purification and Characterisation of Organic Compounds

- Purification - Crystallisation, sublimation, distillation, differential extraction, and chromatography - principles and their applications. Qualitative analysis - Detection of nitrogen, sulphur, phosphorus, and halogens. Quantitative analysis (basic principles only) - Estimation of carbon, hydrogen, nitrogen, halogens, sulphur, phosphorus. Calculations of empirical formulae and molecular formulae; Numerical problems in organic quantitative analysis.

UNIT 13: Some Basic Principles of Organic Chemistry

- Tetravalency of carbon; shapes of simple molecules-hybridization (s and p); classification of organic compounds based on functional groups: -C=C-, -C≡C- and those containing

halogens, oxygen, nitrogen, and sulphur; homologous series; isomerism-structural and stereoisomerism. Nomenclature (Trivial and IUPAC) Covalent bond fission - Homolytic and heterolytic: free radicals, carbocations, and carbanions; stability of carbocations and free radicals, electrophiles and nucleophiles. Electronic displacement in a covalent bond-inductive effect, electromeric effect, resonance, and hyperconjugation. Common types of organic reactions - Substitution, addition, elimination, and rearrangement.

UNIT 14: Hydrocarbons

- Classification, isomerism, IUPAC nomenclature, general methods of preparation, properties and reactions. Alkanes-Conformations: Sawhorse and Newman projections (of ethane); Mechanism of halogenation of alkanes. Alkenes-Geometrical isomerism; Mechanism of electrophilic addition: addition of hydrogen, halogens, water, hydrogen halides (Markownikoff's and peroxide effect); Ozonolysis, oxidation, and polymerization. Alkynes-Acidic character; an addition of hydrogen, halogens, water and hydrogen halides; polymerization. Aromatic hydrocarbons- Nomenclature, benzene-structure, and aromaticity; Mechanism of electrophilic substitution: halogenation, nitration, Friedel-Craft's alkylation, and acylation, directive influence of the functional group in monosubstituted benzene.

UNIT 15: Organic Compounds Containing Oxygen

- General methods of preparation, properties, reactions, and uses. Alcohols: Distinction of primary, secondary and tertiary alcohols; mechanism of dehydration. Reactions of hydroxyl derivatives. Phenols: Acidic nature, electrophilic substitution reactions: halogenation, nitration, and sulphonation, Reimer-Tiemann reaction. Addition to >C=O group, relative reactivities of aldehydes and ketones. Ethers: Structure. Aldehyde and Ketones: Nature of carbonyl group; Nucleophilic addition reactions (addition of HCN, NH3 and its derivatives), Grignard reagent; oxidation; reduction (Wolff Kishner and Clemmensen); the acidity of hydrogen, aldol condensations, Cannizzaro reaction, Haloform reaction; Chemical tests to distinguish between aldehydes and Ketones. Carboxylic acids: Reactions, Acidic strength, and factors affecting it; reactions of acid derivatives.

UNIT 16: Organic Compounds Containing Nitrogen

- General methods of preparation, properties, reactions, and uses. Amines: Nomenclature, classification, structure, basic character, and identification of primary, secondary and tertiary amines and their basic character. Diazonium salts: Importance in synthetic organic chemistry.

UNIT 17: Polymers

- General introduction and classification of polymers, general methods of polymerization–addition and condensation, copolymerization; natural and synthetic rubber and vulcanization; some important polymers with emphasis on their monomers and uses - polyethene, nylon, polyester, and bakelite.

UNIT 18: Biomolecules

- Carbohydrates-Classification: aldoses and ketoses; monosaccharides (glucose and fructose), constituent monosaccharides of oligosaccharides (sucrose, lactose, maltose) and polysaccharides (starch, cellulose, glycogen). Proteins - Elementary Idea of

amino acids, peptide bond, polypeptides; proteins: primary, secondary, tertiary and quaternary structure (qualitative idea only), denaturation of proteins, enzymes. Vitamins - Classification and functions. Nucleic Acids - Chemical constitution of DNA and RNA. Biological functions of nucleic acids.

UNIT 19: Chemistry in Everyday Life

- Chemicals in medicines-Analgesics, tranquillizers, antiseptics, disinfectants, antimicrobials, antifertility drugs, antibiotics, antacids. Antihistamines-their meaning and common examples. Chemicals in food preservatives, artificial sweetening agents-common examples. Cleansing agents–Soaps and detergents, cleansing action.

SRMJEEE 2021 Syllabus for Mathematics (40 Questions)

Candidates who wish to appear for the SRMJEEE 2021, and have opted for PCM group can check the SRMJEEE 2021 syllabus for Mathematics. There are a total of 20 units in the syllabus of Mathematics. Candidates must go through each of the topics given below to prepare for this section in advance.

UNIT 1: Sets, Relations, and Functions

- Sets and their representations, union, intersection, and complements of sets and their algebraic properties, relations, equivalence relations, mappings, one-one, into and onto mappings, the composition of mappings.

UNIT 2: Complex Numbers

- Complex numbers in the form a+ib and their representation in a plane. Argand diagram. Algebra of complex numbers, modulus and argument (or amplitude) of a complex number, square root of a complex number. Cube roots of unity, triangle inequality.

UNIT 3: Matrices and Determinants

- Determinants and matrices of order two and three, properties of determinants, evaluation of determinants. Addition and multiplication of matrices, adjoint, and the inverse of the matrix.

UNIT 4: Applications of Matrices and Determinants

- Computing the rank of a matrix test of consistency and solution of simultaneous linear equations using determinants and matrices.

UNIT 5: Quadratic Equations

- Quadratic equations in real and complex number system and their solutions. The relation between roots and coefficients, nature of roots, the formation of quadratic equations with given roots; symmetric functions of roots, equations reducible to quadratic equations.

UNIT 6: Permutations and Combinations

- The fundamental principle of counting: permutation as an arrangement and combination as selection, the meaning of P(n,r) and C(n,r). Simple applications.

UNIT 7: Mathematical Induction and its Applications

- Stating and interpreting the principle of mathematical induction. Using it to prove formula and facts.

UNIT 8: Binomial Theorem and its Applications

- Binomial theorem for a positive integral index; general term and middle term; Binomial theorem for any index. Properties of binomial coefficients. Simple applications for approximations.

UNIT 9: Sequences and Series

- Arithmetic, geometric and harmonic progressions. Insertion of Arithmetic, geometric and harmonic means between two given numbers. The Relation between A.M., G.M., and H.M. arithmetic, geometric series, exponential and logarithmic series.

UNIT 10: Differential Calculus

- Polynomials, rational, trigonometric, logarithmic and exponential functions. Inverse functions. Graphs of simple functions. Limits, continuity, differentiation of the sum, the difference, product and quotient of two functions, differentiation of trigonometric, inverse trigonometric, logarithmic, exponential, composite and implicit functions, derivatives of order up to two.

UNIT 11: Applications of Differential Calculus

- Rate of change of quantities, monotonic - increasing and decreasing functions, Maxima, and minima of functions of one variable, tangents and normals, Rolle's and Lagrange's mean value theorems.

UNIT 12: Integral Calculus

- Integral as an anti-derivative. Fundamental integrals involving algebraic, trigonometric, exponential and logarithmic functions. Integration by substitution, by parts, and by partial fractions. Integration using trigonometric identities. Integral as limit of a sum. Properties of definite integrals. Evaluation of definite integrals; Determining areas of the regions bounded by simple curves.

UNIT 13: Differential Equations

- Ordinary differential equations, their order, and degree. Formation of differential equations. A solution of differential equations by the method of separation of variables. Solution of homogeneous and linear differential equations and those of the type $d2y / dx2 = f(x)$.

UNIT 14: Straight Lines in Two Dimensions

- Cartesian system of rectangular co-ordinates in-plane, distance formula, area of a triangle, condition for the collinearity of three points and section formula, centroid and in-centre of a triangle, locus and its equation, translation of axes, the slope of a line, parallel and perpendicular lines, intercepts of a line on the coordinate axes.
- Various forms of equations of a line, intersection of lines, angles between two lines, conditions for concurrence of three lines, the distance of a point from a line.

- Equations of internal and external bisectors of angles between two lines, coordinates of the centroid, the orthocentre and circumcentre of a triangle, equation of the family of lines passing through the point of intersection of two lines, homogeneous equation of second degree in x and y, the angle between pair of lines through the origin, combined equation of the bisectors of the angles between a pair of lines, condition for the general second-degree equation to represent a pair of lines, point of intersection and angle between two lines.

UNIT 15: Circles in Two Dimensions

- The standard form of the equation of a circle, the general form of the equation of a circle, its radius and centre, equation of a circle in the parametric form, equation of a circle when the endpoints of a diameter are given, points of intersection of a line and a circle with the centre at the origin and condition for a line to be tangent to the circle, length of the tangent, equation of the tangent, equation of a family of circles through the intersection of two circles, condition for two intersecting circles to be orthogonal.

UNIT 16: Conic Sections in Two Dimensions

- Sections of cones, equations of conic sections (parabola, ellipse, and hyperbola) in standard form, condition for $y = mx+c$ to be a tangent and point(s) of tangency.

UNIT 17: Vector Algebra

- Vectors and scalars, the addition of vectors, components of a vector in two dimensions and three-dimensional space, scalar and vector products, scalar and vector triple product. Application of vectors to plane geometry.

UNIT 18: Measures of Central Tendency and Dispersion

- Calculation of mean, median, and mode of grouped and ungrouped data. Calculation of standard deviation, variance and mean deviation for grouped and ungrouped data.

UNIT 19: Probability

- The probability of an event, addition and multiplication theorems of probability and their applications; Conditional probability; Baye's theorem, the probability distribution of a random variate; binomial and Poisson distributions and their properties.

UNIT 20: Trigonometry

- Trigonometrical identities and equations. Inverse trigonometric functions and their properties. Properties of triangles, including, incentre, circumcenter, and orthocenter, the solution of triangles.

SRMJEEE 2021 Syllabus for Biology (40 Questions)

Aspirants who have applied for the SRMJEEE exam and have taken PCB group can check the SRMJEEE 2021 syllabus for Biology and the chapters that are included are listed below. There are two sections: Botany and Zoology.

SRMJEEE 2021 Syllabus for Botany

Candidates who have opted Biology as their subject can check the SRMJEEE syllabus 2021 for Botany below.

Unit 1: Taxonomy of Angiosperm

- Types of classifications - Artificial, Natural, Phylogenetic - Biosystematics - Binomial Nomenclature - Herbaria and their uses - Bentham and Hooker's classification of plants - Families Malvaceae, Solanaceae - Euphorbiaceae, Musaceae, and Economic Importance.

Unit 2: Plant Anatomy

- Tissues and Tissue System - anatomy of monocot and dicot roots - anatomy of Monocot and dicot stem and anatomy of dicot leaf.

Unit 3: Cell Biology and Genetics

- Chromosomes - Structure and types - genes recombination of chromosomes mutation - a chromosomal aberration - DNA as genetic material - Structure of DNA - replication of DNA - Structure of RNA and its type.

Unit 4: Biotechnology

- Recombinant DNA Technology - Transgenic plants with genetical traits - plant tissue culture and its application - Protoplasmic fusion

Unit 5: Plant Physiology

- Photosynthesis - Significance - site of photosynthesis - photochemical and biosynthetic phases - electron transport system - cyclic and noncyclic photophosphorylation - C3 and C4 pathway - photorespiration - factor affecting photosynthesis - fermentation - plant growth - growth regulators - phytohormones - auxin - gibberellins - cytokinins - ethylene.

Unit 6: Biology in Human Welfare

- Food production - breeding experiments - improved varieties and role of biofertilizer - crop diseases and their control - biopesticides - genetically modified food - sustained agriculture and medicinal plants including microbes.

SRMJEEE 2021 Syllabus for Zoology

Candidates who have opted Biology as their subject can check the SRMJEEE syllabus 2021 for Zoology below.

Unit I: Human Physiology

- Nutrition - introduction - carbohydrates - proteins - lipids - vitamins mineral - water - Balanced diet - calorie value - (ICBM standard) obesity - Hyperglycemia - hypoglycemia - malnutrition. Digestion - enzymes and enzyme action - Bones and Joints (Major types) - Arthritis - Rickets and Osteomalacia - Gout. Muscles - muscle action - muscle tone - Rigor Mortis - aerobic exercises (bodybuilding) myasthenia gravis.
- Respiration - Process of pulmonary respiration - inspiration Expiration - Exchange of gases at alveolar level - Circulation - Functioning of heart origin and conduction of heartbeat - Artificial pacemaker - coronary blood vessels and its significance - myocardial infarction -

Angina pectoria - Atherosclerosis - heart attack - Resuscitation in a heart attack (First aid) Blood components-functions-plasma-corpuscles-blood clotting-anticoagulants-Thrombosis-embolism-blood related diseases like polycythemia-Leukemia-Lymph uid.

- Physiological Coordination System: Brain-functioning of different regions-memory-sleep-stroke Alzheimer's disease-meningitis-Thyroid-parathyroid hormones-insulin and glucagon-Hormones of the adrenal cortex and medulla-Reproductive hormones-problems related to secretion, nonsecretion of hormones.
- Receptor Organs: Eye-Focussing mechanism and photochemistry of retina-short sightedness-Nyctalopia-Eye infection conjunctivitis-Glaucoma-Ear-Hearing mechanism-Hearing impairments and aids - Noise pollution and its importance skin-melanin functions - Effect of solar radiation / UV
  Excretion: Ureotelism-urea-Biosynthesis(ornithine cycle) Nephron-ultrafiltration-tubular reabsorption and tubular secretion-Renal failure-Dialysis kidney stone formation kidney transplantation-Diabetes.
- Reproductive System: Brief account of spermatogenesis and oogenesis-menstrual cycle-in Vitro fertilization-Birth control

Unit 2: Microbiology

- Introduction-History of medical microbiology-The influence of Pasteur, Koch and Lister-Virology-structure Genetics culture and diseases-AIDS and its control-Bacteriology-structure, Genetics and diseases-protozoan microbiology-Diseases oriented-pathogenicity of micro organism-anti microbial resistance chemotherapy.
- Single-cell protein.
- Microbial culture technique and its applications - Strain Isolation and Improvement - Isolation of microbial products.

Unit 3: Immunology

- Innate immunity (Nonspecific) - anatomical Barriers-Physiological barriers-phagocytic barriers Lymphoidal organs-Thymus- Bursa of Fabricius-Peripheral Lymphoid organs-Lymph nodes-Transplantation immunology-Autoimmune disorders.

Unit 4: Modern Genetics and Animal Biotechnology

- Introduction-scope-Human Genetics Karyotyping Chromosome gene mapping-Recombinant DNA technology and segmenting-genetic diseases-Human genome project-cloning-Transgenic organisms-Genetically modified organism(GMO)-Gene therapy-Animal cell culture and its applications-Stem cell technology-Bioethics of genetic engineering in animals.

Unit 5: Environmental Science

- Human population and explosion-issue-Global Warming Crisis-Green house effect-Ozone layer depletion-waste management-Biodiversity conservation (Biosphere reserve)

Unit 6: Applied Biology

- Livestock and management-Breeds-Farming method-poultry diseases-Economic value Pisciculture-sh farming-Edible shes of Tamil Nadu.

Unit 7: Theories of Evolution

- The Lamarckism-Darwinism-modern concept of natural selection-species of concept-origin of species and isolating mechanism. Extractive metallurgy of sodium, lithium, properties of alkali metals, basic nature of oxides and hydroxides, compounds of alkaline earth metals, compounds of boron. Oxides, carbides, halides, and sulphides of the carbon group. Oxides-classification-acidic, basic, neutral, peroxide and amphoteric oxides.

SRMJEEE 2021 Syllabus for English

Questions in this part contain Comprehension type questions in the form of short passages or lines of poems or a dialogue. The candidate should read the given text and answer the set of questions. Each question has 4 choices, out of which choose the best answer.

SRMJEEE 2021 Syllabus for Aptitude

1. **Number System**
   Properties of numbers, Divisibility rules, Unit digit, Euclid's algorithm, LCM, and GCD
2. **Statistics**
   The arithmetic mean, weighted mean, Geometric mean
3. **Percentage**
   Percentage change-increase or decrease
4. **Profit and Loss**
   Computing percentage of profit or loss and profit/loss value
5. **Quadratic Equation**
   Nature of roots, Relationship between roots and coefficients, Solutions of quadratic equations
6. **Geometry**
   Similar triangles, Lines and Angles, Circles and Quadrilaterals
7. **Arrangement**
   Ordering, Grading and Ranking, coding and decoding
8. **Direction Sense test**
   Finding direction, distance or both
9. **Linear Equation**
   Solving simultaneous equations, Test of consistency, problems on ages
10. **Trigonometry**
    Values of trigonometric ratios, Identities, Heights, and distances