UNIT IX: Behaviour of Perfect Gas and Kinetic Theory

- Equation of state of a perfect gas, work done on compressing a gas.
- *Kinetic theory of gases:* Assumptions, concept of pressure. Kinetic energy and temperature; degrees of freedom, law of equipartition of energy (statement only) and application to specific heat capacities of gases; concept of mean free path.

UNIT X: Oscillations and Waves

- Periodic motion-period, frequency, displacement as a function of time. Periodic functions. Simple harmonic motion(SHM) and
 its equation; phase; oscillations of a spring-restoring force and force constant; energy in SHM –Kinetic and potential energies;
 simple pendulum-derivation of expression for its time period; free, forced and damped oscillations (qualitative ideas only),
 resonance.
- Wave motion. Longitudinal and transverse waves, speed of wave motion. Displacement relation for a progressive wave. Principle of superposition of waves, reflection of waves, standing waves in strings and organ pipes, fundamental mode and harmonics. Beats. Doppler effect.

CONTENTS OF CLASS XII SYLLABUS

UNIT I: Electrostatics

- Electric charges and their conservation. Coulomb's law-force between two point charges, forces between multiple charges; superposition principle and continuous charge distribution.
- Electric field, electric field due to a point charge, electric field lines; electric dipole, electric field due to a dipole; torque on a dipole in a uniform electric field.
- Electric flux, statement of Gauss's theorem and its applications to find field due to infinitely long straight wire, uniformly charged infinite plane sheet and uniformly charged thin spherical shell (field inside and outside)
- Electric potential, potential difference, electric potential due to a point charge, a dipole and system of charges: equipotential surfaces, electrical potential energy of a system of two point charges and of electric diploes in an electrostatic field.
- Conductors and insulators, free charges and bound charges inside a conductor. Dielectrics and electric polarization, capacitors and capacitance, combination of capacitors in series and in parallel, capacitance of a parallel plate capacitor with and without dielectric medium between the plates, energy stored in a capacitor, Van de Graaff generator.

UNIT II: Current Electricity

- Electric current, flow of electric charges in a metallic conductor, drift velocity and mobility, and their relation with electric current;
 Ohm's law, electrical resistance, V-I characteristics (liner and non-linear), electrical energy and power, electrical resistivity and conductivity.
- Carbon resistors, colour code for carbon resistors; series and parallel combinations of resistors; temperature dependence of resistance.
- Internal resistance of a cell, potential difference and emf of a cell, combination of cells in series and in parallel.
- Kirchhoff's laws and simple applications. Wheatstone bridge, metre bridge.
- Potentiometer-principle and applications to measure potential difference, and for comparing emf of two cells; measurement of internal resistance of a cell.

UNIT III: Magnetic Effects of Current and Magnetism

- Concept of magnetic field, Oersted's experiment. Biot-Savart law and its application to current carrying circular loop.
- Ampere's law and its applications to infinitely long straight wire, straight and toroidal solenoids. Force on a moving charge in uniform magnetic and electric fields. Cyclotron.
- Force on a current-carrying conductor in a uniform magnetic field. Force between two parallel current-carrying conductorsdefinition of ampere. Torque experienced by a current loop in a magnetic field; moving coil galvanometer-its current sensitivity and conversion to ammeter and voltmeter.
- Current loop as a magnetic dipole and its magnetic dipole moment. Magnetic dipole moment of a revolving electron. Magnetic
 field intensity due to a magnetic dipole (bar magnet) along its axis and perpendicular to its axis. Torque on a magnetic dipole
 (bar magnet) in a uniform magnetic field; bar magnet as an equivalent solenoid, magnetic field lines; Earth's magnetic field and
 magnetic elements.
- Para-, dia-and ferro-magnetic substances, with examples.
- Electromagnetic and factors affecting their strengths. Permanent magnets.

UNIT IV: Electromagnetic Induction and Alternating Currents

- Electromagnetic induction; Faraday's law, induced emf and current; Lenz's Law, Eddy currents. Self and mutual inductance.
- Alternating currents, peak and rms value of alternating current/ voltage; reactance and impedance; LC oscillations (qualitative treatment only), LCR series circuit, resonance; power in AC circuits, wattles current.
- AC generator and transformer.

UNIT V: Electromagnetic Waves

- Need for displacement current.
- Electromagnetic waves and their characteristics (qualitative ideas only). Transverse nature of electromagnetic waves.
- Electromagnetic spectrum (radio waves, microwaves, infrared, visible, ultraviolet, x-rays, gamma rays) including elementary facts about their uses.

UNIT VI: Optics

- Reflection of light, spherical mirrors, mirror formula. Refraction of light, total internal reflection and its applications optical fibres, refraction at spherical surfaces, lenses, thin lens formula, lens-maker's formula. Magnification, power of a lens, combination of thin lenses in contact combination of a lens and a mirror. Refraction and dispersion of light through a prism.
- Scattering of light- blue colour of the sky and reddish appearance of the sun at sunrise and sunset.
- Optical instruments: Human eye, image formation and accommodation, correction of eye defects (myopia and hypermetropia) using lenses.
- Microscopes and astronomical telescopes (reflecting and refracting) and their magnifying powers.
- Wave optics: Wavefront and Huygens' principle, reflection and refraction of plane wave at a plane surface using wavefronts.
- Proof of laws of reflection and refraction using Huygens' principle.
- Interference, Young's double hole experiment and expression for fringe width, coherent sources and sustained interference of light.
- Diffraction due to a single slit, width of central maximum.
- Resolving power of microscopes and astronomical telescopes. Polarisation, plane polarized light; Brewster's law, uses of plane polarized light and Polaroids.

UNIT VII: Dual Nature of Matter and Radiation

- Photoelectric effect, Hertz and Lenard's observations; Einstein's photoelectric equation- particle nature of light.
- Matter waves- wave nature of particles, de Broglie relation. Davisson-Germer experiment (experimental details should be omitted; only conclusion should be explained).

UNIT VIII: Atoms and Nuclei

- Alpha- particle scattering experiments; Rutherford's model of atom; Bohr model, energy levels, hydrogen spectrum. Composition and size of nucleus, atomic masses, isotopes, isotopes.
- Radioactivity- alpha, beta and gamma particles/ rays and their properties decay law. Mass-energy relation, mass defect; binding energy per nucleon and its variation with mass number, nuclear fission and fusion.

UNIT IX: Electronic Devices

• Energy bands in solids (qualitative ideas only), conductors, insulators and semiconductors; semiconductor diode-*I-V* characteristics in forward and reverse bias, diode as a rectifier; *I-V* characteristics of LED, photodiode, solar cell, and Zener diode; Zener diode as a voltage regulator. Junction transistor, transistor action, characteristics of a transistor; transistor as an amplifier (common emitter configuration) and oscillator. Logic gates (OR, AND, NOT, NAND and NOR). Transistor as a switch.

CHEMISTRY

CONTENTS OF CLASS XI SYLLABUS

UNIT I: Some Basic Concepts of Chemistry

- General Introduction: Important and scope of chemistry.
- Laws of chemical combination, Dalton's atomic theory: concept of elements, atoms and molecules.
- Atomic and molecular masses. Mole concept and molar mass; percentage composition and empirical and molecular formula; chemical reactions, stoichiometry and calculations based on stoichiometry.

UNIT II: Structure of Atom

Atomic number, isotopes and isobars. Concept of shells and subshells, dual nature of matter and light, de Broglie's relationship,
Heisenberg uncertainty principle, concept of orbital, quantum numbers, shapes of s,p and d orbitals, rules for filling electrons in
orbitals- Aufbau principle, Pauli exclusion principles and Hund's rule, electronic configuration of atoms, stability of half filled and
completely filled orbitals.

UNIT III: Classification of Elements and Periodicity in Properties

• Modern periodic law and long form of periodic table, periodic trends in properties of elements- atomic radii, ionic radii, ionization enthalpy, electron gain enthalpy, electronegativity, valence.

UNIT IV: Chemical Bonding and Molecular Structure

• Valence electrons, ionic bond, covalent bond, bond parameters, Lewis structure, polar character of covalent bond, valence bond theory, resonance, geometry of molecules, VSEPR theory, concept of hybridization involving *s*, *p* and *d* orbitals and shapes of some simple molecules, molecular orbital theory of homonuclear diatomic molecules (qualitative idea only). Hydrogen bond.

UNIT V: States of Matter: Gases and Liquids

- Three states of matter, intermolecular interactions, types of bonding, melting and boiling points, role of gas laws of elucidating the concept of the molecule, Boyle's law, Charle's law, Gay Lussac's law, Avogadro's law, ideal behaviour of gases, empirical derivation of gas equation. Avogadro number, ideal gas equation. Kinetic energy and molecular speeds (elementary idea), deviation from ideal behaviour, liquefaction of gases, critical temperature.
- Liquid State- Vapour pressure, viscosity and surface tension (qualitative idea only, no mathematical derivations).

UNIT VI: Thermodynamics

- First law of thermodynamics-internal energy and enthalpy, heat capacity and specific heat, measurement of ΔU and ΔH, Hess's law of constant heat summation, enthalpy of : bond dissociation, combustion, formation, atomization, sublimation, phase transition, ionization, solution and dilution.
- Introduction of entropy as state function, Second law of thermodynamics, Gibbs energy change for spontaneous and non-spontaneous process, criteria for equilibrium and spontaneity.
- Third law of thermodynamics- Brief introduction.

UNIT VII: Equilibrium

• Equilibrium in physical and chemical processes, dynamic nature of equilibrium, law of chemical equilibrium, equilibrium constant, factors affecting equilibrium-Le Chatelier's principle; ionic equilibrium- ionization of acids and bases, strong and weak electrolytes, degree of ionization, ionization of polybasic acids, acid strength, concept of PH., Hydrolysis of salts (elementary idea), buffer solutions, Henderson equation, solubility product, common ion effect (with illustrative examples).

UNIT VIII: Redox Reactions

 Concept of oxidation and oxidation and reduction, redox reactions oxidation number, balancing redox reactions in terms of loss and gain of electron and change in oxidation numbers.

UNIT IX: Hydrogen

• Occurrence, isotopes, preparation, properties and uses of hydrogen; hydrides-ionic, covalent and interstitial; physical and chemical properties of water, heavy water; hydrogen peroxide-preparation, reactions, uses and structure;

UNIT X: s-Block Elements (Alkali and Alkaline earth metals)

- Group I and group 2 elements:
- General introduction, electronic configuration, occurrence, anomalous properties of the first element of each group, diagonal
 relationship, trends in the variation of properties (such as ionization enthalpy, atomic and ionic radii), trends in chemical reactivity
 with oxygen, water, hydrogen and halogens; uses.
- Preparation and Properties of Some important Compounds:
- Sodium carbonate, sodium chloride, sodium hydroxide and sodium hydrogencarbonate, biological importance of sodium and potassium.
- Industrial use of lime and limestone, biological importance of Mg and Ca.

UNIT XI: Some p-Block Elements

• General Introduction to p-Block Elements.

- *Group 13 elements:* General introduction, electronic configuration, occurrence, variation of properties, oxidation states, trends in chemical reactivity, anomalous properties of first element of the group; Boron, some important compounds: borax, boric acids, boron hydrides. Aluminium: uses, reactions with acids and alkalies.
- General 14 elements: General introduction, electronic configuration, occurrence, variation of properties, oxidation states, trends in chemical reactivity, anomalous behaviour of first element. Carbon, allotropic forms, physical and chemical properties: uses of some important compounds: oxides.
- Important compounds of silicon and a few uses: silicon tetrachloride, silicones, silicates and zeolites, their uses.

UNIT XII: Organic Chemistry- Some Basic Principles and Techniques

- General introduction, methods of purification qualitative and quantitative analysis, classification and IUPAC nomenclature of organic compounds.
- Electronic displacements in a covalent bond: inductive effect, electromeric effect, resonance and hyper conjugation.
- Homolytic and heterolytic fission of a covalent bond: free radials, carbocations, carbanions; electrophiles and nucleophiles, types
 of organic reactions.

UNIT XIII: Hydrocarbons

- Alkanes- Nomenclature, isomerism, conformations (ethane only), physical properties, chemical reactions including free radical mechanism of halogenation, combustion and pyrolysis.
- Alkanes-Nomenclature, structure of double bond (ethene), geometrical isomerism, physical properties, methods of preparation: chemical reactions: addition of hydrogen, halogen, water, hydrogen halides (Markovnikov's addition and peroxide effect), ozonolysis, oxidation, mechanism of electrophilic addition.
- Alkynes-Nomenclature, structure of triple bond (ethyne), physical properties, methods of preparation, chemical reactions: acidic character of alkynes, addition reaction of- hydrogen, halogens, hydrogen halides and water.
- Aromatic hydrocarbons- Introduction, IUPAC nomenclature; Benzene; resonance, aromaticity; chemical properties: mechanism
 of electrophilic substitution- Nitration sulphonation, halogenation, Friedel Craft's alkylation and acylation; directive influence of
 functional group in mono-substituted benzene; carcinogenicity and toxicity.

UNIT XIV: Environmental Chemistry

• Environmental pollution: Air, water and soil pollution, chemical reactions in atmosphere, smogs, major atmospheric pollutants; acid rain ozone and its reactions, effects of depletion of ozone layer, greenhouse effect and global warming-pollution due to industrial wastes; green chemistry as an alternative tool for reducing pollution, strategy for control of environmental pollution.

CONTENTS OF CLASS XII SYLLABUS

UNIT I: Solid State

• Classification of solids based on different binding forces; molecular, ionic covalent and metallic solids, amorphous and crystalline solids (elementary idea), unit cell in two dimensional and three dimensional lattices, calculation of density of unit cell, packing in solids, packing efficiency, voids, number of atoms per unit cell in a cubic unit cell, point defects, electrical and magnetic properties, Band theory of metals, conductors, semiconductors and insulators.

UNIT II: Solutions

Types of solutions, expression of concentration of solutions of solids in liquids, solubility of gases in liquids, solid solutions, colligative properties- relative lowering of vapour pressure, Raoult's law, elevation of boiling point, depression of freezing point, osmotic pressure, determination of molecular masses using colligative properties abnormal molecular mass. Van Hoff factor.

UNIT III: Electrochemistry

Redox reactions, conductance in electrolytic solutions, specific and molar conductivity variation of conductivity with
concentration, kohlrausch's Law, electrolysis and Laws of electrolysis (elementary idea), dry cell- electrolytic cells and Galvanic
cells; lead accumulator, EMF of a cell, standard electrode potential, Relation between Gibbs energy change and EMF of a cell,
fuel cells; corrosion.

UNIT IV: Chemical Kinetics

 Rate of a reaction (average and instantaneous), factors affecting rates of reaction; concentration, temperature, catalyst; order and molecularity of a reaction; rate law and specific rate constant, integrated rate equations and half life (only for zero and first order reactions); concept of collision theory (elementary idea, no mathematical treatment). Activation energy, Arrhenious equation.

UNIT V: Surface Chemistry

 Adsorption-physisorption and chemisorption; factors affecting adsorption of gases on solids, catalysis homogeneous and heterogeneous, activity and selectivity: enzyme catalysis; colloidal state: distinction between true solutions, colloids and suspensions; lyophillic, lyophobic multimolecular and macromolecular colloids; properties of colloids; Tyndall effect, Brownian movement, electrophoresis, coagulation; emulsions- types of emulsions.

UNIT VI: General Principles and Processes of Isolation of Elements

• Principles and methods of extraction- concentration, oxidation, reduction electrolytic method and refining; occurrence and principles of extraction of aluminium, copper, zinc and iron.

UNIT VII: p- Block Elements

- Group 15 elements: General introduction, electronic configuration, occurrence, oxidation states, trends in physical and chemical
 properties; preparation and properties of ammonia and nitric acid, oxides of nitrogen (structure only); Phosphorous- allotropic
 forms; compounds of phosphorous: preparation and properties of phosphine, halides (PCI₃, PCI₅) and oxoacids (elementary idea
 only).
- Group 16 elements: General introduction, electronic configuration, oxidation states, occurrence, trends in physical and chemical properties; dioxygen: preparation, properties and uses; classification of oxides; ozone. Sulphur allotropic forms; compounds of sulphur: preparation, preparation, properties and uses of sulphur dioxide; sulphuric acid: industrial process of manufacture, properties and uses, oxoacids of sulphur (structures only).
- Group 17 elements: General introduction, electronic configuration, oxidation states, occurrence, trends in physical and chemical properties; compounds of halogens: preparation, properties and uses of chlorine and hydrochloric acid, interhalogen compounds oxoacids of halogens (structures only).
- Group 18 elements: General introduction, electronic configuration, occurrence, trends in physical and chemical properties, uses.

UNIT VIII: d and f Block Elements

- General introduction, electronic configuration, characteristics of transition metals, general trends in properties of the first row transition metals- metallic character, ionization enthalpy, oxidation states, ionic radii, colour, catalytic property, magnetic properties, interstitial compounds, alloy formation. Preparation and properties of K2Cr2O7 and KMnO4.
- Lanthanoids- electronic configuration, oxidation states, chemical reactivity, and lanthanoid contraction and its consequences.
- Actinoids: Electronic configuration, oxidation states and comparison with lanthanoids.

UNIT IX: Coordination Compounds

Coordination compounds: Introduction, ligands, coordination number, colour, magnetic properties and shapes, IUPAC nomenclature of mononuclear coordination compounds, isomerism (structural and stereo) bonding, Werner's theory VBT,CFT; importance of coordination compounds (in qualitative analysis, biological systems).

UNIT X: Haloalkanes and Haloarenes

- Haloalkanes: Nomenclature, nature of C –X bond, physical and chemical properties, mechanism of substitution reactions. Optical rotation.
- Haloarenes: Nature of C-X bond, substitution reactions (directive influence of halogen for monosubstituted compounds only).
- Uses and environment effects of dichloromethane, trichloromethane, tetrachloromethane, iodoform, freons, DDT.

UNIT XI: Alcohols, Phenols and Ethers

- Alcohols: Nomenclature, methods of preparation, physical and chemical properties (of primary alcohols only); identification of
 primary, secondary and tertiary alcohols; mechanism of dehydration, uses with special reference to methanol and ethanol.
- Phenols: Nomenclature, methods of preparation, physical and chemical properties, acidic nature of phenol, electrophillic substitution reactions, uses of phenols.
- Ethers: Nomenclature, methods of preparation, physical and chemical properties uses.

UNIT XII: Aldehydes, Ketones and Carboxylic Acids

- Aldehydes and Ketones: Nomenclature, nature of carbonyl group, methods of preparation, physical and chemical properties; and mechanism of nucleophilic addition, reactivity of alpha hydrogen in aldehydes; uses.
- Carboxylic Acids: Nomenclature, acidic nature, methods of preparation, physical and chemical properties; uses.

UNIT XIII: Organic Compounds Containing Nitrogen

- Amines: Nomenclature, classification, structure, methods of preparation, physical and chemical properties, uses, identification of primary secondary and tertiary amines.
- Cyanides and Isocyanides- will be mentioned at relevant places.
- Diazonium salts: Preparation, chemical reactions and importance in synthetic organic chemistry.

UNIT XIV: Biomolecules

- Carbohydrates- Classification (aldoses and ketoses), monosaccharide (glucose and fructose), D.L. configuration, oligosaccharides (sucrose, lactose, maltose), polysaccharides (starch, cellulose, glycogen): importance.
- *Proteins* Elementary idea of amino acids, peptide bond, polypeptides, proteins, primary structure, secondary structure, tertiary structure and quaternary structure (qualitative idea only), denaturation of proteins; enzymes.
- Hormones- Elementary idea (excluding structure).
- Vitamins- Classification and function.
- Nucleic Acids: DNA and RNA

UNIT XV: Polymers

• Classification- Natural and synthetic, methods of polymerization (addition and condensation), copolymerization. Some important polymers: natural and synthetic like polyesters, bakelite; rubber, Biodegradable and non-biodegradable polymers.

UNIT XVI: Chemistry in Everyday Life

- Chemicals in medicines- analgesics, tranquilizers, antiseptics, disinfectants, antimicrobials, antifertility drugs, antibiotics, antacids, antihistamines.
- Chemicals in food- preservatives, artificial sweetening agents, elementary idea of antioxidants.
- Cleansing agents- soaps and detergents, cleansing action.

BIOLOGY

CONTENTS OF CLASS XI SYLLABUS

UNIT I: Diversity in Living World

- What is living?; Biodiversity; Need for classification; Three domains of life; Taxonomy & Systematics; Concept of species and taxonomical hierarchy; Binomial nomenclature; Tools for study of Taxonomy Museums, Zoos, Herbaria, Botanical gardens.
- Five kingdom classification; salient features and classification of Monera; Protista and Fungi into major groups; Lichens; Viruses and Viroids.
- Salient features and classification of plants into major groups-Algae, Bryophytes, Pteridophytes, Gymnosperms and Angiosperms (three to five salient and distinguishing features and at least two examples of each category); Angiosperms- classification up to class, characteristic features and examples).
- Salient features and classification of animals-nonchordate up to phyla level and chordate up to classes level (three to five salient features and at least two examples).

UNIT II: Structural Organisation in Animals and Plants

- Morphology and modifications; Tissues; Anatomy and functions of different parts of flowering plants: Root, stem, leaf, inflorescence-cymose and recemose, flower, fruit and seed (To be dealt along with the relevant practical of the Practical Syllabus).
- Animal tissues; Morphology, anatomy and functions of different systems (digestive, circulatory, respiratory, nervous and reproductive) of an insect (cockroach). (Brief account only)

UNIT III: Cell Structure and Function

- Cell theory and cell as the basic unit of life; Structure of prokaryotic and eukaryotic cell; Plant cell and animal cell; Cell envelope, cell membrane, cell wall; Cell organelles-structure and function; Endomembrane system-endoplasmic reticulum, Golgi bodies, lysosomes, vacuoles; mitochondria, ribosomes, plastids, micro bodies; Cytoskeleton, cilia, flagella, centrioles (ultra structure and function); Nucleus-nuclear membrane, chromatin, nucleolus.
- Chemical constituents of living cells: Biomolecules-structure and function of proteins, carbodydrates, lipids, nucleic acids;
 Enzymes-types, properties, enzyme action.
- B Cell division: Cell cycle, mitosis, meiosis and their significance.

UNIT IV: Plant Physiology

- Transport in plants: Movement of water, gases and nutrients; Cell to cell transport-Diffusion, facilitated diffusion, active transport; Plant water relations Imbibition, water potential, osmosis, plasmolysis; Long distance transport of water Absorption, apoplast, symplast, transpiration pull, root pressure and guttation; Transpiration-Opening and closing of stomata; Uptake and translocation of mineral nutrients-Transport of food, phloem transport, Mass flow hypothesis; Diffusion of gases (brief mention).
- Mineral nutrition: Essential minerals, macro and micronutrients and their role; Deficiency symptoms; Mineral toxicity; Elementary idea of Hydroponics as a method to study mineral nutrition; Nitrogen metabolism-Nitrogen cycle, biological nitrogen fixation.
- Photosynthesis: Photosynthesis as a means of Autotrophic nutrition; Site of photosynthesis take place; pigments involved in Photosynthesis (Elementary idea); Photochemical and biosynthetic phases of photosynthesis; Cyclic and non cyclic and photophosphorylation; Chemiosmotic hypothesis; Photorespiration C3 and C4 pathways; Factors affecting photosynthesis.
- Respiration: Exchange gases; Cellular respiration-glycolysis, fermentation (anaerobic), TCA cycle and electron transport system (aerobic); Energy relations-Number of ATP molecules generated; Amphibolic pathways; Respiratory quotient.
- Plant growth and development: Seed germination; Phases of Plant growth and plant growth rate; Conditions of growth; Differentiation, dedifferentiation and redifferentiation; Sequence of developmental process in a plant cell; Growth regulators-auxin,gibberellin, cytokinin, ethylene, ABA; Seed dormancy; Vernalisation; Photoperiodism

UNIT V: Human Physiology

- Digestion and absorption; Alimentary canal and digestive glands; Role of digestive enzymes and gastrointestinal hormones; Peristalsis, digestion, absorption and assimilation of proteins, carbohydrates and fats; Caloric value of proteins, carbohydrates and fats; Egestion; Nutritional and digestive disorders PEM, indigestion, constipation, vomiting, jaundice, diarrhea.
- Breathing and Respiration: Respiratory organs in animals (recall only); Respiratory system in humans; Mechanism of breathing and its regulation in humans-Exchange of gases, transport of gases and regulation of respiration Respiratory volumes; Disorders related to respiration-Asthma, Emphysema, Occupational respiratory disorders.
- Body fluids and circulation: Composition of blood, blood groups, coagulation of blood; Composition of lymph and its function; Human circulatory system-Structure of human heart and blood vessels; Cardiac cycle, cardiac output, ECG, Double circulation; Regulation of

cardiac activity; Disorders of circulatory system-Hypertension, Coronary artery disease, Angina pectoris, Heart failure.

- Excretory products and their elimination: Modes of excretion- Ammonotelism, ureotelism, uricotelism; Human excretory system-structure and fuction; Urine formation, Osmoregulation; Regulation of kidney function-Renin-angiotensin, Atrial Natriuretic Factor, ADH and Diabetes insipidus; Role of other organs in excretion; Disorders; Uraemia, Renal failure, Renal calculi, Nephritis; Dialysis and artificial kidney.
- Locomotion and Movement: Types of movement- ciliary, fiagellar, muscular; Skeletal muscle- contractile proteins and muscle contraction; Skeletal system and its functions (To be dealt with the relevant practical of Practical syllabus); Joints; Disorders of muscular and skeletal system-Myasthenia gravis, Tetany, Muscular dystrophy, Arthritis, Osteoporosis, Gout.
- Neural control and coordination: Neuron and nerves; Nervous system in humans- central nervous system, peripheral nervous system and visceral nervous system; Generation and conduction of nerve impulse; Reflex action; Sense organs; Elementary structure and function of eye and ear.
- Chemical coordination and regulation: Endocrine glands and hormones; Human endocrine system-Hypothalamus, Pituitary, Pineal, Thyroid, Parathyroid, Adrenal, Pancreas, Gonads; Mechanism of hormone action (Elementary Idea); Role of hormones as messengers and regulators, Hypo-and hyperactivity and related disorders (Common disorders e.g. Dwarfism, Acromegaly, Cretinism, goiter, exopthalmic goiter, diabetes, Addison's disease).

(Imp: Diseases and disorders mentioned above to be dealt in brief.)

CONTENTS OF CLASS XII SYLLABUS

UNIT I: Reproduction

- Reproduction in organisms: Reproduction, a characteristic feature of all organisms for continuation of species; Modes of reproduction – Asexual and sexual; Asexual reproduction; Modes-Binary fission, sporulation, budding, gemmule, fragmentation; vegetative propagation in plants.
- Sexual reproduction in flowering plants: Flower structure; Development of male and female gametophytes; Pollination-types, agencies and examples; Outbreeding devices; Pollen-Pistil interaction; Double fertilization; Post fertilization events-Development of endosperm and embryo, Development of seed and formation of fruit; Special modes-apomixis, parthenocarpy, polyembryony; Significance of seed and fruit formation.
- Human Reproduction: Male and female reproductive systems; Microscopic anatomy of testis and ovary; Gametogenesis-spermatogenesis & oogenesis; Menstrual cycle; Fertilisation, embryo development upto blastocyst formation, implantation; Pregnancy and placenta formation (Elementary idea); Parturition (Elementary idea); Lactation (Elementary idea).
- Reproductive health: Need for reproductive health and prevention of sexually transmitted diseases (STD); Birth control-Need and Methods, Contraception and Medical Termination of Pregnancy (MTP); Amniocentesis; Infertility and assisted reproductive technologies IVF, ZIFT, GIFT (Elementary idea for general awareness).

UNIT II: Genetics and Evolution

- Heredity and variation: Mendelian Inheritance; Deviations from Mendelism-Incomplete dominance, Co-dominance, Multiple
 alleles and Inheritance of blood groups, Pleiotropy; Elementary idea of polygenic inheritance; Chromosome theory of
 inheritance; Chromosomes and genes; Sex determination-In humans, birds, honey bee; Linkage and crossing over; Sex linked
 inheritance-Haemophilia, Colour blindness; Mendelian disorders in humans-Thalassemia; Chromosomal disorders in humans;
 Down's syndrome, Turner's and Klinefelter's syndromes.
- Molecular basis of Inheritance: Search for genetic material and DNA as genetic material; Structure of DNA and RNA; DNA
 packaging; DNA replication; Central dogma; Transcription, genetic code, translation; Gene expression and regulation-Lac Operon;
 Genome and human genome project; DNA finger printing.
- Evolution: Origin of life; Biological evolution and evidences for biological evolution from Paleontology, comparative anatomy, embryology and molecular evidence); Darwin's contribution, Modern Synthetic theory of Evolution; Mechanism of evolution-Variation (Mutation and Recombination) and Natural Selection with examples, types of natural selection; Gene flow and genetic drift; Hardy-Weinberg's principle; Adaptive Radiation; Human evolution.

UNIT III: Biology and Human Welfare

- Health and Disease; Pathogens; parasites causing human diseases (Malaria, Filariasis, Ascariasis. Typhoid, Pneumonia, common
 cold, amoebiasis, ring worm); Basic concepts of immunology-vaccines; Cancer, HIV and AIDS; Adolescence, drug and alcohol
 abuse.
- Improvement in food production; Plant breeding, tissue culture, single cell protein, Biofortification; Apiculture and Animal husbandry.

• Microbes in human welfare: In household food processing, industrial production, sewage treatment, energy generation and as biocontrol agents and biofertilizers.

UNIT IV: Biotechnology and Its Applications

- Principles and process of Biotechnology: Genetic engineering (Recombinant DNA technology).
- Application of Biotechnology in health and agriculture: Human insulin and vaccine production, gene therapy; Genetically modified organisms-Bt crops; Transgenic Animals; Biosafety issues-Biopiracy and patents.

UNIT V: Ecology and environment

- Organisms and environment: Habitat and niche; Population and ecological adaptations; Population interactions-mutualism, competition, predation, parasitism; Population attributes-growth, birth rate and death rate, age distribution.
- Ecosystem: Patterns, components; productivity and decomposition; Energy flow; Pyramids of number, biomass, energy; Nutrient cycling (carbon and phosphorous); Ecological succession; Ecological Services-Carbon fixation, pollination, oxygen release.
- Biodiversity and its conservation: Concept of Biodiversity; Patterns of Biodiversity; Importance of Biodiversity; Loss of Biodiversity; Biodiversity conservation; Hotspots, endangered organisms, extinction, Red Data Book, biosphere reserves, National parks and sanctuaries.
- Environmental issues: Air pollution and its control; Water pollution and its control; Agrochemicals and their effects; Solid waste management; Radioactive waste management; Greenhouse effect and global warning; Ozone depletion; Deforestation; Any three case studies as success stories addressing environmental issues.



APPENDIX-II

LIST OF CITIES FOR CENTRES OF NATIONAL ELIGIBILITY CUM ENTRANCE TEST (UG) -2017

STATE/UT	CITY	City Code
ANDAMAN & NICOBAR	PORT BLAIR	901
ANDHDA DDADECH	VIJAYAWADA	902
ANDHRA PRADESH	VISAKHAPATNAM	903
ARUNACHAL PRADESH	ITANAGAR	904
ASSAM	DIBRUGARH	905
	GUWAHATI	906
BIHAR	GAYA	907
DITIAN	PATNA	908
CHANDIGARH	CHANDIGARH	909
CHHATTISGARH	RAIPUR	910
DADRA & NAGAR HAVELI	DADRA & NAGAR HAVELI	911
DAMAN & DIU	DAMAN	912
	DELHI (CENTRAL)	913
	DELHI (EAST)	914
DELHI	DELHI (NORTH)	915
	DELHI (SOUTH)	916
	DELHI (WEST)	917
GOA	PANAJI	918
	AHMEDABAD	919
GUJARAT	RAJKOT	920
	SURAT	921
	VADODARA	922
	FARIDABAD	923
HARYANA	GURGAON	924
	HAMIRPUR	925
HIMACHAL PRADESH	SHIMLA	926
	JAMMU	927
JAMMU & KASHMIR	SRINAGAR	928
	BOKARO	929
JHARKHAND	RANCHI	930
	BANGALORE	931
	BELGAUM	932
KARNATAKA	GULBARGA	933
	MANGALORE	934
	ERNAKULAM	935
KERALA	KOZHIKODE	936
	TRIVANDRUM	937
LAKSHADWEEP	KAVARATTI	938
	BHOPAL	939
	GWALIOR	940
MADHYA PRADESH	INDORE	941
W. WITH TIMPLET	JABALPUR	942
	AUDULI OIL	342

STATE/UT	CITY	City Code
	AURANGABAD	944
	MUMBAI	945
	NAGPUR	946
MAHARASHTRA	NASIK	947
	PUNE	948
	THANE	949
MANIPUR	IMPHAL	950
MEGHALAYA	SHILLONG	951
MIZORAM	AIZAWL	952
NACALAND	DIMAPUR	953
NAGALAND	КОНІМА	954
	BEHRAMPUR	955
ODISHA	BHUBANESHWAR	956
	ROURKELA	957
PUDUCHERRY	PUDUCHERRY	958
	BHATINDA	959
PUNJAB	JALANDHAR	960
X	AJMER	961
(b)	JAIPUR	962
RAJASTHAN	КОТА	963
	UDAIPUR	964
SIKKIM	GANGTOK	965
	CHENNAI	966
	COIMBATORE	967
TAMIL NADU	MADURAI	968
	SALEM	969
	TIRUCHIRAPALLI	970
	HYDERABAD	971
TELANGANA	WARANGAL	972
TRIPURA	AGARTALA	973
-(U)	DEHRADUN	974
UTTARAKHAND	HALDWANI	975
	BAREILLY	976
	GHAZIABAD	977
	JHANSI	978
UTTAR PRADESH	LUCKNOW	979
	NOIDA	980
	VARANASI	981
	DURGAPUR	982
WEST BENGAL	KOLKATA	983
1120. 22.10/12	SILIGURI	984
	5.2.001.0	707

APPENDIX-III

SELF DECLARATION PROFORMA FOR CANDIDATES BELONGING TO ANDHRA PRADESH, TELANGANA AND J & K

Regn. Number:		Photo
	Carr/Dayahtar af	
I,	Son/Daughter of	
do hereb	y solemnly affirm and state as follows:	
1	That I am not eligible to appear for the MBBS/BDS seats in states of Telangana/J&K and hence not eligible to seek admission in Medical/Andhra Pradesh/ Telangana /J&K.	
2	That I am not domiciled in Andhra Pradesh/ Telangana /J&K.	
3	That I further declare that the said declaration is made by me on my own understanding all the rules and its implications.	after knowing and
4	That if above statement of mine is found incorrect at any time, my candic NEET, MBBS/BDS respectively be cancelled and legal action as deemed against me.	
Date:	PAIR	
	Right hand Index finger impression Signature of candidate	
	Name: er's Name: er's Name: Address:	

This declaration will be auto generated and submitted online only at the time of filling the online application form by the candidates belonging to Andhra Pradesh, Telangana and J&K and claiming 15% seats under All India Quota.

APPENDIX-IV

STATE MEDICAL EDUCATION DIRECTORATES & OFFICES WHERE COUNSELING RELATED INFORMATION MAY BE AVAILABLE

ANDAMAN & NICOBAR ISLANDS		
The Director (Health Services),	Telephone No.	. : 03192-233331
Directorate of Health Services,	Fax No.	: 03192-232910
Andaman & Nicobar Administration,	Website	: www.dhs.andaman.gov.in
Secretariat, Port Blair-744101	E-mail ID	: dirdhs.and@nic.in
ARUNACHAL PRADESH		
The Director (Health Services),	Telephone No.	. : 0360-2244248
Directorate of Health Services	Fax No.	: 0360-2244182
Govt. of Arunachal Pradesh,	Website	: http://www.apdhte.nic.in/
Naharlagun, Arunachal Pradesh-791110	E-mail ID	: dhsnlg@gmail.com
Distt. Papumpare		
ASSAM		
The Director of Medical Education,	Telephone No.	: 0361-2366236
Office of the Director of Medical Education,	Fax No.	: 0361-2366236
Sixmile, Khanapara, Guwahati,	Website	: www.dmeassam.gov.in
Assam, Pin-781022	E-mail ID	: dmeassam@gmail.com, dme@assam.gov.in
ANDHRA PRADESH		
The Director of Health,	Tel. (Off)	: 040-24602514-16
Directorate of Medical Education	Fax No.	: 040-24656909, 24600769
DM&HS Campus	Email	: dmetelangana.gov.in
Koti, Hyderabad	Website	: dmetelangana@gmail.com
BIHAR	rba Se	
The Director of Medical Education	Telephone No.	:0612-2234992
Directorate of Health Services, Department of Health & Family Welfare,	Website E-mail ID	:http://health.bih.nic.in/
VikasBhawan	L-IIIali ID	:as-health-bih@nic.in
Patna-800001, Bihar		
CHANDIGARH		
The Director Principal,	Telephone No.	: 0172-2601023-4321
Govt. Medical College Hospital,	Fax No.	: 0772-2609360
Sector-32,Chandigarh	Website	: www.gmch.gov.in
(भवी -	E-mail ID	: dpgmcc@yahoo.com
CHHATISGARH	11 71 7	
The Director of Medical Education	Telephone No.	: 0771-4264052, 2221621
Directorate of Medical Education	Fax No.	: 0771-2234451
Old Nurses Hostel, Mantralaya Complex,	Website	: www.cgdme.in
Raipur-492001, Chhatisgarh	E-mail ID	: cgdme@rediffmail.com
DADAR AND NAGAR HAVELI		
The Director of Education	Telephone No.	: 0260-2630792
1st Floor, Building No.5,	Fax No.	: 0260-2642006
P.W.D. Office Complex,	Website	: http://dnh.nic.in/
Dadra and Nagar Haveli, Silvassa.	E-mail ID	: asde-admn-dnh@nic.in

DAMAN & DIU (UT)		
The Assistant Director (Technical Education)	Telephone No.	: 0260-2231707, 2230468
UT Administration of Daman & Diu	Fax No.	: 0260-2251351
Government Polytechnic,	Website	: http://daman.nic.in
Varkund, MotaFalia	E-mail ID	: pers.dd@nic.in, ceodp-dmn-dd@nic.in
Nani Daman-396210		
DELHI		
The Director Health Services,	Telephone No.	: 011-22309220,
Directorate of Health Services,	Website	: www. Health.delhigovt.nic.in
F-17, Karkardooma,	E-mail ID	: dirdhs@nic.in
Delhi-110 032		
GOA	,	
The Assistant Director,	Telephone No.	: 0832-2416370
Centralized Admission Division (CAD)	Fax No.	: 0832-2413572
Directorate of Technical Education,	Website	: www.dtegoa.gov.in
Alto-Porvorim, Goa-403571	E-mail ID	:dir-dte.goa@nic.in
GUJARAT		
The Dean	Telephone No.	: 079-22680074
B.J. Medical College,	Fax No.	: 079-22683067
IA Sarwa, Ahmedabad	Website	: www.bjmc.org
Gujarat	E-mail ID	: dean.bjmc@hotmail.com
HARYANA		20
The Director,	Telephone No.	: 0172-2560799
Medical Education & Research Haryana	Fax No.	: 0172-2566556
ParyatanBhawan,	Website	: haryanahealth.nic.in
Bays No.55-58,	E-mail ID	: dmer.haryana@gmail.com
Sector-2, Panchkula.	5555	
HIMACHAL PRADESH		
The Director,	Telephone No.	: 0177-2624895
Medical Education & Research,	Fax No.	: 0177-2620733
Block No.o6, SDA Complex,	Website	: www.hp.gov.in/hpdmer
Kusumti, Shimla-171009.	E-mail ID	:directorateme@yahoo.com
JAMMU & KASHMIR		
The Director (Health Services)	Telephone No.	: 0191-2546338 (0)
Directorate of Health Services, Jammu Division,	Fax No.	: 0191-2549632, 2566599
Near MLA's Hostel, Jammu Tawi	Website	: http://www.jkhealth.org
Jammu - 180001	E-mail ID	: dhsjammu@rediffmail.com
The Director (Health Services)	Telephone No.	: 0194-2452052 (O)
Directorate of Health Services, Old Secretariat (J & K), Srinagar,	Fax No.	: 0194-24527313
Kashmir	Website	: http://www.jkhealth.org
	E-mail ID	: amarist786@gmail.com, dhsk76@gmail.com
JHARKHAND		
The Controller of Examination	Telephone No.	:0651-6999170-71
Jharkhand Combined Entrance Competitive Examination Board,	Fax No.	: 0651-2230336
markiland Combined Entrance Competitive Examination Board,	Tax No.	100)122)0))0
Science & Technology Campus, SirkhaToli, Namkum-Tupudana Road, Namkum, Ranchi -834023	Website	: www.jceceb.jharkhand.gov.in

KARNATAKA		
The Executive Director	Telephone No.	: 080-2360460
Karnataka Examinations Authority	Fax No.	: 080-23461576
18th Cross, Sampige Road, Malleshwaram,	Website	: kea.kar.nic.in
Bangalore-560 012.	E-mail ID	: keauthority-ka@nic.in
KERALA	,	
The Commissioner for Entrance Examinations	Telephone No.	: 0471-2332120, 2338487
Vth Floor, Housing Board Buildings,	Fax No.	: 0471-2337228
Santhi Nagar, Thiruvananthapuram-695001	Website	: www.cee-kerala.org
	E-mail ID	: ceekinfo@cee.kerala.gov.in
LAKSHADWEEP (UT)	,	
The Director of Education,	Telephone No.	: 04896-262241
Department of Education	Fax No.	: 04896-262264
UT of Lakshadweep.	Website	: www.lakshadweep.nic.in
	E-mail ID	: lk-doe@hub.nic.in
MAHARASHTRA		
The Director	Telephone No.	: 022-22620361-365,
Medical Education & Research,	Fax No.	: 022-22620562/22652168
St. Georges Hospital Campus,	Website	: www.dmer.org
Govt. Dental College Building,	E-mail ID	: dmercetcell@gmail.com
4th Floor, Near CST Railway Station, Mumbai-400 001.		
MIZORAM	1995	
The Director,	Telephone No.	: 0389-2340926
Higher & Technical Education,	Fax No.	: 0389-2340927
Govt. of Mizoram,	Website	: http://healthmizoram.nic.in
Mcdonald Hill, Zarkawt,	E-mail ID	: director_htemz@yahoo.com
Aizawl, Mizoram		
MADHYA PRADESH		6
The Director	Telephone No.	: 0755-2551307, 2551719
Directorate of Medical Education,	Website	: www. medicaleducation.mp.gov.in
SatpuraBhawan,	E-mail ID	: dme12001@yahoo.com
Bhopal, Madhya Pradesh		
MANIPUR		
The Director, (Medical Education)	Telephone No.	: 0385-2411484, 2414629
Directorate of Health Services,	Fax No.	: 0364-2414625
Imphal, Manipur	Website	: http://rims.edu.in
	E-mail ID	: director@rims.edu.in
MEGHALAYA		
The Commissioner & Secretary,	Telephone No.	: 0364-2223760
Health & Family Welfare,	Website	: www.meghealth.gov.in
Meghalaya Secretariat,	E-mail ID	: kmarb2007@gmail.com
Addl. Building, R.No.315,		
Shillong-793001		
Meghalaya.		

NAGALAND		
The Director	Telephone No.	: 0370-2270409
Directorate of Technical Education,	Fax No.	: 0370-2270409
Kohima, Nagaland	Website	: www.dtenagaland.org.in
, 0	E-mail ID	: direch.edu-ng@nic.in, mhasetonakro@yahoo.com
ODISHA		
The Chairman	Telephone No.	: 0674-6552455-58
Odisha Joint Entrance Examination	Fax No.	: 0674-2352457
JEE Cell, Gandamunda, Khandagiri,	Website	: www.odishajee.com, www.ojee.nic.in
Dist. Khurda,	E-mail ID	: odishajee2015@gmail.com
Bhubaneshwar-751030	L-mail 10	. odisnaje e zoro (w grnani.com
PUDUCHERRY (UT)		
The Director (Health)	Talaphana Na	: 0413-2229355 (O)
,		
Directorate of Medical & F.W. Services, Housing Board Building, Opposite LIC,	Fax No.	: 0413-2339351
Health Department Complex, Puducherry-605001	Website	: http://health.puducherry.gov.in
	E-mail ID	: dms.pon@nic.in
PUNJAB	-	
The Vice-Chancellor,		: 01639-256232, 256236, 257883-84
Baba Farid University of Health Sciences,	Fax No.	: 01639-256234, 01639-256235
Sadiq Road,	Website	: www.bfuhs.ac.in
Faridkot-151203 (Punjab)	E-mail ID	: generalinfo@bfuhs.ac.in
RAJASTHAN	//	8.
The Secretary (Medical Education)	Telephone No.	: 0141-2227132
Directorate of Medical Education	Fax No.	: 0141-2227797
Govt. Secretariat Building, C-Scheme, Jaipur.	Website	: www.medicaleducation.rajasthan.gov.in
	E-mail ID	: phsrajasthan@gmail.com
SIKKIM	1446 5555	
The Secretary	Tel. (Off)	: 03592-203050, 03592-221611
Human Resource Development Department,	Fax No. website	: 03592-221611 : sikkimhrdd.org
Govt. of Sikkim,	E-mail ID	: techeduskm@gmail.com
Tashiling, Gangtok – 737103	E-IIIaii ID	. techeduskin@gmaii.com
TAMIL NADU		
The Director (Public Health and Preventive Medicine)	Telephone No.	: 044-24320802
Directorate of Health Services,	Fax No.	: 044-24323942
359, Anna Salai, Teynampet, Chennai-600006	Website	: http://www.tnhealth.org
110	E-mail ID	: dphpm@rediffmail.com
TRIPURA		
The Director (Medical Education)	Telephone No	: 0381-2325232 (O)
2 nd Floor Tripura AIDS Controll Society Building	Fax No.	: 0381-2325232
, , ,		
Opp. IGM Hospital	Website	: http://www.tripurahealthservices.in
Agartala, Tripura-799001	E-mail ID	: directormetripura@gmail.com
UTTRAKHAND The Disease Constant	Talantinina	
The Director General		: 0135-2723026, 2723028
Directorate of Medical Education,	Fax No.	: 0135-2723027
107, Chander Nagar,	Website	: www.ua.nic.in
Dehradun, Uttrakhand.	E-mail ID	: medicaleducation11@gmail.com

UTTAR PRADESH		
The Director General (Medical Education & Training)	Telephone No.	: 0522-2287653
6th Floor, JawaharBhawan,	Fax No.	: 0522-2288193
Ashok Marg,	Website	: www.updgme.in
Lucknow(UP)	E-mail ID	: dgmededu@gmail.com
WEST BENGAL		
The Chairman	Telephone No.	: 033-22123853, 22551633
Central Selection Committee	Fax No.	: 033-22123770
Medical College, 88, College Street,	Website	: medicalcollegekolkata.org.
Kolkata-700 073.	E-mail ID	: lahiritapan@yahoo.co.in
DGHS		
Prof(Dr) B. Srinivas	Telephone No.	: 011-23062493
The Assistant Director General (ME),	Fax No.	: 011-23061907
Directorate General Of Health Services	Website	: WWW.MCC.NIC.IN
Room No.352, 'A' Wing, NirmanBhawan, New Delhi	E-Mail ID	: AIQPMT-MCC@NIC.IN
AFMC, PUNE		
The Nodal Officer,	Telephone No.	: 011-23092349
Room No.48A, 'M' Block,	Fax No.	: 011-23092562/23092992
DGAFMS/DG-1D, Ministry of Defence,	Website	: www.afmc.nic.in, www.afmcdg1d.gov.in
New Delhi.	E-mail ID	: oicexams.afmc@nic.in, afmcdg1d@nic.in,
	Har.	ojcadmission@gmail.com
DELHI UNIVERSITY		34
The Dean,	Telephone No.	: 011-27662764, 27667647, 27662208
Faculty of Medical Sciences,	Fax No.	: 011-27662763
VPCI Building, 6th Flolor,	Website	: www.fmsc.ac.in
University of Delhi,	E-mail ID	: dean-medical@du.ac.in
Delhi-110 007	-	Co

APPENDIX -V

LIST OF STATE CODES

NAME OF THE STATE/UT	CODE No.
Jammu and Kashmir	01
Himachal Pradesh	02
Punjab	03
Chandigarh	04
Uttarakhand	05
Haryana	06
Delhi	07
Rajasthan	08
Uttar Pradesh	09
Bihar	10
Sikkim	11
Arunachal Pradesh	12
Nagaland	13
Manipur	14
Mizoram	15
Tripura	16
Meghalaya	17
Assam	18
West Bengal	19
Jharkhand	20
Odisha	21
Chhattisgarh	22
Madhya Pradesh	23
Gujarat	24
Daman & Diu	25
Dadra & Nagar Haveli	26
Maharashtra	27
Andhra Pradesh	28
Karnataka	29
Goa	30
Lakshadweep	31
Kerala	32
Tamil Nadu	33
Puducherry	34
Andaman & Nicobar Islands	35
Telangana	36

Foreign Nations will select the name of their country at the appropriate place.

<u>APPENDIX – VI</u>

LIST OF CODE OF OCCUPATION

(For Father's/Guardian's/Mother's only)

Occupation	Code
Agriculture	01
Business	02
Medical	03
Engineering	04
Law practice	05
Government service	06
Public sector service	07
Private service	08
Teaching/research	09
Other(including house wife)	10

LIST OF CODE OF INCOME

(For Father's/Guardian's/Mother's only)

Income	Code
Upto Rs.25000	01
Rs.25001-50000	02
Rs 50001-75000	03
Rs 75001-100000	04
Rs.100001-200000	05
Rs.200001 - 450000	06
Rs.450001 - 550000	07
Rs.550001 - 650000	08
Rs.650001 AND ABOVE	09

LIST OF CODE OF QUALIFICATION

(For Father's/Guardian's/Mother's only)

Qualification	Code
Illiterate	01
Below class X	02
Class X and class XII	03
Diploma in Engineering	04
Graduate – BA/BSc/BCom/BCA	05
Engineering Graduate – BE/BTech/BSc(Engg)	06
Medicine Graduate – MBBS/BDS/BUMS/BVSC	07
Law Graduate – LLB	08
Post graduate – MA/MSc/MCom/MCA	09
Engineering Post Graduate – ME/MTech/MSc(Tech)	10
Medical Post Graduate – MD/MS/MVSc	11
Law Post Graduate – LLM	12
MBA/CA/ICWA	13
PhD/DPhil/DSc/DM	14

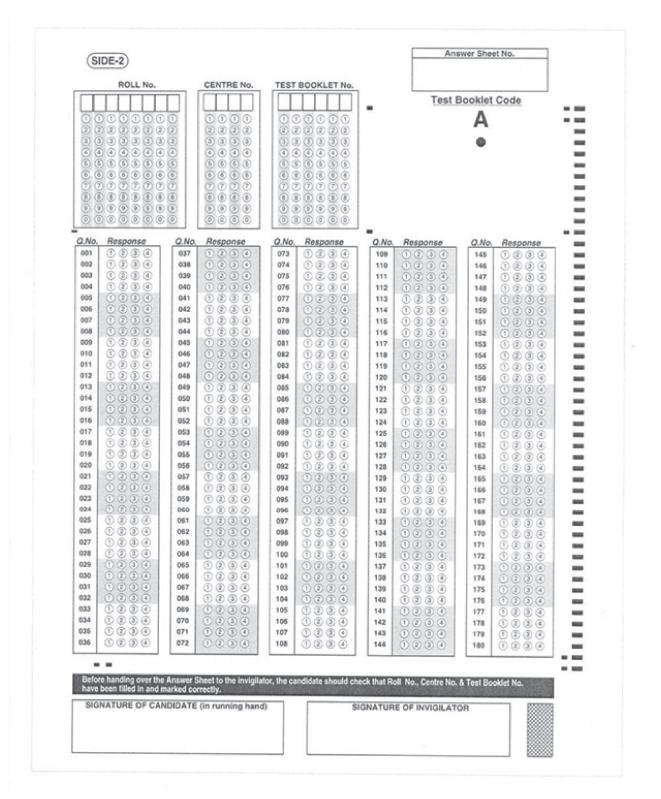
APPENDIX- VII

LIST OF CODES OF THE SCHOOL EDUCATION BOARDS OF CLASS XII

BOARDS	CODES
Andhra Pradesh Board of Intermediate Education	01
Assam Higher Secondary Education Council	02
Bihar Intermediate Education Council	03
Central Board of Secondary Education	04
Chhattisgarh Madhyamik Shiksha Mandal	05
Council for the Indian School Certificate Examinations	06
Goa Board of Secondary and Higher Secondary Education	07
Gujarat Secondary Education Board	08
Haryana Board of Education	09
H P Board of School Education	10
J & K State Board of School Education	11
Jharkhand Academy Council	12
Karnataka Board of Pre-University Education	13
Kerala Board of Public Examinations	14
Madhya Pradesh Board of Secondary Education	15
Maharashtra State Board of Secondary & Higher Secondary Education	16
Manipur Council of Higher Secondary Education	17
Meghalaya Board of Secondary Education	18
Mizoram Board of School Education	19
Nagaland Board of School Education	20
Orissa Council of Higher Secondary Education	21
Punjab School Education Board	22
Rajasthan Board of Secondary Education	23
Tamil Nadu Board of Higher Secondary Education	24
Tripura Board of Secondary Education	25
U.P. Board of High School & Intermediate Education	26
Uttaranchal Shiksha Evam Pariksha Parishad	27
West Bengal Council of Higher Secondary Education	28
National Institute of Open Schooling	29
Jamia Milia Islamia, New Delhi	30
Aligarh Muslim University, Aligharh	31
Dayalbagh Education Institute, Agra	32
Banasthali Vidyapeeth, Rajasthan	33
Vishwa Bharti University, Shantiniketan, Birbhoom, West Bengal	34
Rajiv Gandhi University of Knowledge Technologies, Hyderabad	35
Haryana Open School, Bhiwani	36
Rajasthan State Open School, Jaipur	37
MP State Open School, Bhopal	38
Andhra Pradesh Open School Society	39
Bihar Board of Open Schooling Examination	40
Chhattisgarh State open School	41
Telangana State Board of Intermediate Education	42
Other	99

Specimen copy of the Answer Sheet

				(SIL	DE-
FILL IN THE FOLLOWING BALL PO ROLL NUMBER (IN NUME	DINT PEN ONLY	JE/BLACK	पृष्ठ–2 पर उत्तर अंकित INSTRUCTIONS FOR।		
			USE BLUE-BLACK BALL POINT PEN C	MLY)
ROLL NUMBER IN WORD	S (in running hand)	Use Or 2 कृपया पृ			ircle.
NAME OF THE CANDIDAT	E (IN CAPITAL LETTE	3 प्रत्येक प्र दीजिए र	रन का उत्तर केवल एक ही प् हैसा नीचे दिखाया गया है।	रूरे गोले में गहरा निशान लगाकर	
		गलत Wrong	गलत गलत	ach Question as shown below : गलत सही Wrong Correc	
FATHER'S NAME (IN CAP	PITAL LETTERS)	●② ③ 4 किसी उ	■ X ② ③ ■ X ② ③ तर के लिए एक बार गोले में		-
CENTRE NUMBER		No Cha 5 उत्तर परि	अनुमन्य नहीं है। nge in the Answer once m त्रेका पर अन्य कहीं कोई निश do not make any stray ma	ान न लगााइए।	
EXAMPLE:		Mark yo	শিয়াল স্ন্যান্তং दीजिए। sur answer only in the appr the number corresponding	opriate space in the Answer Sh to the question.	neet
EXAMPLES - HOW 1				ALL POINT PEN ONL	
Roll No. is11252735	Centre No. is 1126 Centre No.	No. is 135364 Test Booklet No.	Question Number 027 is (2)	IMPORTANT The candidate shou	ıld
1 1 2 5 2 7 3 5	1 1 2 6	1 3 5 3 6 4 • ① ① ① ① ①		check carefully that the Test Booklet Code print on Side-2 of the Answ Sheet is the same a printed on Test Bookl	he ed ver



APPENDIX-IX

DETAILS OF MEDICAL/DENTAL COLLEGES

- The list of Medical Colleges is available on website http://www.mciindia.org/.
- The list of Dental Colleges is available on website http://www.dciindia.org.in/.



APPENDIX-X

CERTIFICATE OF LOCOMOTOR DISABILITY

(For Admission to Medical Courses in All India Quota)

Vardhman Mahavir Medical College & Safdarjang Hospital, New Delhi – 110029

All India Institute of Physical Medicine and Rehabilitation, Hazi Ali, Mumbai – 100034

Institute of Post Graduate Medical Education & Research, Kolkata – 700020

Madras Medical College, Park Town, Chennai – 600003

(Select and tick-mark any one of the above)

Certificate No	Dated	
This is to certify that Dr./Mr./I	Ms	
Aged Years Son/	Daughter of Mr.	
R/o		
Rank No is	suffering From	(Name of
The Disease) and has Perma	anent Physical Impairment (PPI) of I	Left/Right/Both Lower Limb. He/She is
Locomotor disabled and has	the percentage of	(in words)
(in Figur	e) of (40% - 70%) disability of lower lim	bs.
He/She is eligible/NOT eligi guidelines subject to his be	ble for admission in Medical/Dentaling otherwise medically fit.	Courses as per the MCI/DCI
		Recent Passport size photograph of the candidate duly attested by the issuing authority
Sign.& Name	Sign. & Name	Sign. & Name
(Specialist, Deptt.PMR)	(Specialist, Deptt.Ortho.)	(Specialist, Deptt. PMR/ Ortho.)

PROFORMA FOR SCHEDULED CASTE AND SCHEDULED TRIBE CERTIFICATE

Form of certificate as prescribed in M.H.A., O.M., No. 42/21/49-N.G.S. dated the 28.1.1952, as revised in Dept. of Per- & A.R. letter No. 36012/6/76-Est. (S.CT), dated the 29.10.1977, to be produced by candidate belonging to a Scheduled Caste or a Scheduled Tribe in support of his/her claim.

		CASTE CERTIFICATE		
This is to certi	fy that Shri/Smt./Kum.*	son/daughter³	* ofof villa	ge/town*
		of the State/Union Territory* Caste/Scheduled Tribe*under:	belongs to the	Caste,
The ConstitThe Constit	ution (Scheduled Caste) Ord ution (Scheduled Tribe) Ord ution (Scheduled Caste) (Ur ution (Scheduled Tribe) (Ur	er, 1950 nion Territories) Order, 1951		
Act, 1960, t	he Punjab Re- organization	d Scheduled Tribe Lists (Modification Act, 1966, the State of Himachal eduled Castes and Scheduled Trib	Pradesh Act, 1970 the Nort	h Eastern Areas
 The Constit 	ution (Andaman and Nicoba ution (Dadar and Nagar Hav ution (Dadar and Nagar Hav ution (Puducherry) Schedul ution (Uttar Pradesh) Sched ution (Goa, Daman & Diu) So ution (Goa, Daman & Diu) So ution (Nagaland) Scheduled ution (Sikkim) Scheduled Ca ution (Sikkim) Scheduled Tr	duled Tribes, Order, 1967. cheduled Caste Order, 1968. cheduled Tribes, Order, 1968. I Tribes Order, 1970. aste Order, 1978. ibes Order, 1978.	al ale	
% 2. Applicable Administrat		te/Schedule Tribe persons who ha	ive migrated from one State,	/Union Territory
District/Divi te/tribe whi by the	father/mother of the control of	of the Scheduled Caste/Scheduled Shri/Smt/Kum*	of village/town* who belongs to the e State/Union Territory* date% 3. Sh	ir cas issued ri*/Smt.*/Kum*
			Signature	e
Place	State/Union Territory	/ ** Designa	ntion	

- * Please delete the words which are not applicable.
- Please quote specific Presidential Order.

Date---- (With seal of Office)

- % Delete the paragraph which is not applicable.
- ** Should be signed by the Authorities empowered to issue Scheduled Caste/Scheduled Tribe certificates as specified above.

APPENDIX-XII

PROFORMA FOR OTHER BACKWARD CLASS (OBC) CERTIFICATE

(CERTIFICATE TO BE PRODUCED BY OTHER BACKWARD CLASS APPLYING FOR ADMISSION TO CENTRAL EDUCATIONAL INSTITUTE (CEIs) UNDER THE GOVERNMENT OF INDIA)

	is	to	certify		Shri/Smt.								Son/D	aughte	r	of	Shri/
Dr				of V	illage/Towr				/Divisior				_ in the				
State	e bel	ongs	to the			Comn	nunity w	hich is re	cognize	d as a	backw	vard c	lass un	der:			
(i) R	esolut	ion No). 12011/68/	93-BCC(C) dated 10/09	/93 publishe	ed in the Ga	zette of Ind	dia Extrao	ordinar	y part I S	Section	l No. 186	dated 1	3/09/	93.	
(ii) R	esolut	ion No). 12011/9/9 <i>/</i>	4-BCC da	ted 19/10/94 p	oublished in	the Gazett	e of India	Extrac	ordinar	y part I S	Section	l No. 163	dated 2	0/10/	94.	
(iii) R	esolut	ion No). 12011/7/95	5-BCC dat	ed 24/05/95 p	oublished in	the Gazett	e of India	Extrac	ordinar	y part I S	Section	I No. 88	dated 2	5/05/	95.	
(iv) R	esolut	ion No). 12011/96/	94-BCC d	ated 09/03/96	5.											
(v) R	esolut	ion No). 12011/44/	96-BCC d	ated 06/12/96	published ii	n the Gaze	tte of India	Extraoro	dinary p	oart I Se	ction I I	No. 120 d	ated 11/1	<u>2</u> /96.		
(vi) R	esolut	ion No). 12011/13/9	7-BCC da	ted 03/12/97.												
(vii) R	esolut	ion No) . 12011/99/	94-BCC d	ated 11/12/97.												
(viii)	F	Resolu	tion No. 120	011/68/98	-BCC dated 2	7/10/99.											
(ix) R	esolut	ion No) . 12011/88/	98-BCC d	ated 06/12/99	published in	n the Gaze	tte of India		Extr	aordina	ry part	l Section	I No. 270	dat	ed 06	/12/99.
	esolut 4/04/2). 12011/36/9	99-BCC d	ated 04/04/20	ooo publishe	ed in the Ga	zette of Inc	dia	Extr	aordina	ry par	t I Sec	ction I	No.	71	dated
	esolut 1/09/20). 12011/44/9	99-BCC d	ated 21/09/20	oo publishe	d in the Ga	zette of Inc	lia	Extr	aordina	ry par	t I Sec	tion I	No.	210	dated
(xii) R	esolut	ion No). 12015/09/	/2000-BC	C dated o6/og)/2001.											
(xiii)	F	Resolu	tion No. 120	011/01/200	o1-BCC dated	19/06/2003.											
(xiv)	F	Resolu	tion No. 120	011/04/20	02-BCC dated	13/01/2004.											
	esolut 5/01/20). 12011/09/2	2004-BCC	dated 16/01/2	2006 publish	ned in the (Gazette of I	ndia	Extr	aordina	ry par	t I Sec	tion I	No.	210	dated
(xvi)	F	Resolu	tion No. 20	012/129/2	009/-BC-II dat	ted 04/03/20	14 publish	ed in the Ga	azette of I	ndia Ex	traordir	nary Pai	rt I sectio	n I			
no. 6	3 date	d 04/0	3/2014.														
Shri/S —	mt./K	um		State.	and/or	his family	ordinarily	reside(s)	in the _	٦				Dis	trict/	'Divisi	on of
of Ind	lia. De	partm	ent of Perso	onnel & 1	not belong t raining O.M. ation of the C	No. 36012/22	2/93-Estt. (S	, , ,				-					
Dated	d:																
											I	District	Magistra	ate/Comp Seal	etei	nt Aut	thority
NOTE	:																

- (a) The Term Ordinarily used here will have the same meaning as in Section 20 of the Representation of the People Act, 1950.
- (b) The authorities competent to issue Caste Certificates are indicated below:
- (i) District Magistrate/Additional Magistrate/Ist Class Stipendiary Magistrate/Sub-Divisional Magistrate/Taluka Magistrate/Executive Magistrate/ Extra Assistant Commissioner (not below the rank of 1st Class Stipendiary Magistate.)
- (ii) Chief Presidency Magistrate/Additional Chief presidency Magistrate/Presidency magistrate.
- (iii) Revenue Officer not below the rank of Tehsildar.
- (iv) Sub-Divisional Officer of the area where the candidate and/or his family resides.
- (c) The annual income/status of the parents of the applicant should be based on financial year ending March 31, 2017.

APPENDIX-XIII

IMPORTANT INFORMATION AT A GLANCE

1 Fee Details

Schedule for on-line submission of application forms	31.01.2017 to 01.03.2017
Last date for successful final transaction of fee	01.03.2017
Date of uploading of Admit-Cards on website	15.04.2017
Date of Examination, NEET(UG) – 2017	07.05.2017
Display of OMR Sheet	Will be intimated through website
Display of Answer Key	Will be intimated through website
Declaration of Result	08.06.2017

2 Time Schedule NATIONAL ELIGIBILITY CUM ENTRANCE TEST NEET (UG)-2017

(;	a) Entr	y in the Examination Hall	7.30 AM to 9.30 AM
٠,	a, =:::::	, in the Examination nan	7. 10 7 1111 60 9. 10 7 1111

(b) Checking of Admit Cards by the invigilator : 9.30 AM to 9.45 AM

(c) Distribution of Test Booklet : 9.45 AM

(d) Seal of the Test Booklet to be broken/opened to take out the Answer Sheet : 9.55 AM

(e) Latest Entry in the Examination Hall : 9.30 AM

(f) Test Commences : 10.00 AM

(g) Test Concludes : 01.00 PM

3 Material to be brought on the day of examination : Admit Card, Passport size Photograph and Post

Card Size Photograph affixed on proforma.

4 Rough Work : All rough work is to be done in the Test Booklet only. The candidate will not do any rough work

or put stray mark on the machine gradable

Answer Sheet.

5 Use of Blue/Black Ball Point Pen only : Pen will be provided at the centre for writing of

particulars on the Test Booklet and responses on

the Answer Sheet.