

Scientific Assistant

Name of the post	Subject	Syllabus
Scientific Assistant	Botany	Plant Diversity & Evolution: Viruses, Bacteria, Algae, Fungi, Lichens, Bryophytes, Pteridophytes, Gymnosperms, Angiosperms. Plant Structure & Function: Morphology, Anatomy (of angiosperms), Embryology, Plant Physiology, Biochemistry. Genetics & Molecular Biology: Cell Biology, Genetics, Genomics, Recombinant DNA Technology, Plant Biotechnology. Ecology & Environment: Plant Ecology, Phytogeography, Environmental Botany, Plant Pathology. Applied Botany: Economic Botany, Plant Breeding, Phytopathology, Biotechnology Applications.
	Chemistry	Inorganic Chemistry: Atomic structure, periodic trends, chemical bonding (ionic, covalent, VSEPR), p-block, d-block, f-block elements, coordination compounds, lanthanides, actinides. Organic Chemistry: Nomenclature, isomerism (structural, stereoisomerism), reaction mechanisms (electrophilic, nucleophilic), spectroscopy (NMR, IR), functional groups (alkanes, alkenes, alkynes, aromatics), biomolecules (carbohydrates, proteins, nucleic acids). Physical Chemistry: States of Matter (gases, liquids, solids), Thermodynamics, Chemical Kinetics, Electrochemistry, Quantum Chemistry, Solutions, Surface Chemistry.
	Zoology	Invertebrates: Classification, key phyla (Protozoa, Porifera, Coelenterata, Platyhelminthes, Annelida, Arthropoda, Mollusca, Echinodermata), their biology, and type studies (e.g., Sycon, Earthworm, Unio). Vertebrates: Classification (Pisces, Amphibia, Reptilia, Aves, Mammalia), comparative anatomy of organ systems

		<p>(integument, skeletal, digestive, respiratory, circulatory, urogenital, nervous). Animal Physiology: Digestion, respiration, circulation, excretion, nervous system, muscle physiology, reproduction, and endocrinology. Biochemistry & Molecular Biology: Biomolecules (carbs, proteins, lipids, nucleic acids), metabolism, enzymes, cell biology, and DNA technology. Genetics & Evolution: Mendelian inheritance, molecular genetics, population genetics, speciation, and evolutionary biology. Ecology & Environment: Ecosystems, biogeochemical cycles, pollution, biodiversity, conservation, and wildlife. Developmental Biology: Gametogenesis, embryogenesis (e.g., chick, mammals), and developmental patterns. Biostatistics & Bioinformatics: Data analysis and computational tools in biology.</p>
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