

ALIGARH MUSLIM UNIVERSITY, ALIGARH

FACULTY OF MEDICINE

SYLLABUS FOR

BACHELOR'S DEGREE IN ALLIED AND HEALTHCARE / DIPLOMA IN ALLIED AND HEALTHCARE

PHYSICS

Physical World & Measurement – Kinematics – Dynamics – Laws of Motion – Work, Energy & Power – Motion of System of particles & Rigid Body – Gravitation – Properties of Matter – Thermodynamics – Behavior of Perfect Gas & Kinetic Theory of gases – Oscillations & Waves – Electrostatics – Current Electricity –Magnetic Effect of current and Magnetism – Electromagnetic Induction and Alternating current – Electromagnetic Waves – Ray Optics – Wave Optics – Dual Nature of Matter – Atoms and Nuclei – Electronic Devices – Communication Systems

CHEMISTRY

Basic concepts of Chemistry – Structure of Atom – Classification of Elements and Periodicity in Properties – Chemical Bonding and molecular Structure – States of Matter: Gases and Liquids – Thermodynamics – Equilibrium – Redox Reactions – Hydrogen – s-Block Elements – Organic Chemistry : Basic Principles and Techniques – Hydrocarbons – Environmental Chemistry – Solid State – Solutions – Electrochemistry – Chemical kinetics – Surface Chemistry – Electro Chemistry – Chemistry of Non-metals – General principles and processes of Isolation of Elements – p-Block Elements, d- and f -Block Elements – Coordination Compounds – Haloalkanes and Haloarenes – Alcohols, Phenols and Ethers – Aldehydes, Ketones and Carboxylic acids – Organic Compounds containing Nitrogen – Biomolecules – Polymers – Chemistry in Everyday life.

BOTANY

Nature and Scope of Biology – Biomembranes, Cell membranes –Structural organization of cell – Cellular Respiration – Kingdom Monera – Kingdom Fungi –Plant Kingdom – Biosphere - Natural Resources and their utilization – Forest conservation – Environmental pollution – Multicellularity: Structure and Function – Plant Life –Continuity of Life – Origin and Evolution of Life–Application of Biology.

ZOOLOGY

Origin of Life and its maintenance – Cell as a unit of Life – Cell Biology – Small Biomolecules of cell – Macro molecules of cell – Enzymes – Cell Reproduction – Biological Classification – Kingdom Protista – Animal Kingdom – Organisms and Environment – Species and Population – Biotic Community – Eco system – Wild life conservation – Noise Pollution –Multicellularity: Structure and Function Animal Life – Theories of Evolution and Human Evolution –Application of Zoology – Human Physiology – Genetics – Embryology – Biotechnology and its applications.