

Syllabus for Molecular Medicine (SCPH19)

Note:

- i. There will be one Question Paper which will have 100 questions.
- ii. All questions will be compulsory.
- iii. The Question Paper will have two Parts i.e. Part A and Part B
- iv. Part A will have 50 questions based on Research Methodology
- v. Part B will have 50 questions based on Subject-Specific Knowledge.

Section A; General Aptitude/Research Methodology

Section B; Different Subject Areas of Molecular Medicine

Basic Math's; Geometry, Statistics, Arithmetic's, Log, Basic knowledge of Computer science. Chemistry: Concept of Molarity, Normality, Related to Periodic Table, Organic Chemistry, Synthesis, Thermodynamics, Entropy, Enthalpy, Free energy, Law of Mass action, Reaction kinetics Physics; Newton's law, radioactivity, Electricity, capacitance, optics, sound, gravity, spectroscopy. Basic Biology; Zoology/Botany - classification/Evolution Biology/Population Biology, General Aptitude and reasoning.

Section B

Biochemistry: Metabolism, Nutrition, Biomolecules, Hormones, Enzymes, Omics. Microbiology: Bacterial genetics, Antibiotics mode of action, Infectious disease, Industrial Biotechnology. Physiology, Diseases, Pharmacology, Genetics, Molecular Biology, Developmental Biology, Zoology, Population genetics. Botany, Molecular Biology, Advanced Chemistry; Spectroscopy, Molarity/Normality, Radioactivity, Atomic Structure, Acid base, ph. Medicinal Chemistry: Drug-receptor interaction, DNA, Protein, Hormones as receptor, Pharmacokinetics, G-protein coupled receptor, Pharmacodynamics. Cell biology: Organelles, Cell-Cell interaction, Cell signalling/trafficking, Cell cycle. Drug resistance. Immunology

