

Syllabus - EAID CAA Placement Test

Biology

Topics:

1	Chemistry of Life
	Biological macromolecules: Composition, energy values, primary functions
	Properties of water and its role in living organisms
	Enzymes: Roles, effects of pH and temperature on chemical reactions
	Cellular processes: Photosynthesis and cellular respiration
2	Living Organisms' Organization and Development
	Cell structure and function
	Major body systems and processes in living organisms
	Interaction of body systems to maintain homeostasis
3	Inheritance of Traits
	Cell growth and division: Chromosome behavior, consequences of errors
	Gene expression and regulation in eukaryotes and prokaryotes
	Genetic variations: Mendelian and non-Mendelian genetics
4	Genetic Technology
	Genetic engineering: Impact on medicine, industry, agriculture
5	Evolution
	Evolutionary processes: Natural selection, genetic drift
6	Diversity of Life
	Classification of living organisms
	Importance of biodiversity and impact of human activity
7	Ecological Interdependence
	Ecological concepts: Biomes, ecosystems, communities, habitats, niches
	Community interactions and biogeochemical cycles
	Energy flow: Food chains and webs
	Effects of biotic and abiotic factors on ecosystem stability