



WEST BENGAL BOARD (WBBSE) · CLASS 10

Life Science & Environment

Madhyamik Life Science curriculum focusing on physiological control, cellular reproduction, genetics, evolutionary adaptations, and biodiversity conservation in Bengal.

Board: West Bengal Board of Secondary Education (Madhyamik Pariksha)

Theory: 90 Marks

Internal/Practical: 10 Marks (Project)

Exam Duration: 3 Hours 15 Mins

UNIT-WISE SYLLABUS & MARKS BREAKDOWN

UNIT	CHAPTERS & PRESCRIBED TOPICS	MARKS
Topic 1	Control and Coordination in Living Organisms Sensitivity and response in plants: Plant movements (Tropic, Nastic, Taxic); Plant hormones: Auxin, Gibberellin, Cytokinin; Chemical coordination in animals: Endocrine glands (Pituitary, Thyroid, Pancreas, Adrenal, Gonads); Physical coordination: Neurons, synapse, nervous system (Central, Peripheral, Autonomic), reflex action and reflex arc; Structure of human eye, accommodation, vision defects; Locomotion in animals (Amoeba, Paramecium, Earthworm, Fish, Birds, Human bipedal locomotion)	19
Topic 2	Continuity of Life Cell division and cell cycle: Structure of chromosome, DNA, RNA; Mitosis (Prophase, Metaphase, Anaphase, Telophase, Cytokinesis); Significance of meiosis; Reproduction: Modes of asexual reproduction (Fission, budding, regeneration, spore formation, vegetative propagation); Sexual reproduction in flowering plants (Pollination, fertilization, seed development); Human growth and developmental stages	17
Topic 3	Heredity and Common Genetic Diseases Mendelian Genetics: Experiments on garden pea, Law of Segregation, Law of Independent Assortment, Monohybrid and Dihybrid crosses; Genetic diseases in human society: Thalassemia, Haemophilia, Colour blindness, genetic counseling	15
Topic 4	Evolution and Adaptation Origin of Life: Chemical evolution (Oparin-Haldane hypothesis, Miller-Urey experiment); Theories of Evolution: Lamarck's theory (Use and disuse, inheritance of acquired traits), Darwin's theory of natural selection; Evidences of evolution: Morphological and anatomical evidences (Homologous, analogous, vestigial organs), paleontological evidences; Adaptations: Halophytes (Sundari), Xerophytes (Cactus), Animals (Pigeon air sacs, Camel RBC and water conservation, Honey bee waggle dance)	15
Topic 5	Environment, Resources & Conservation Nitrogen cycle and human disruption; Environmental pollution: Air, water, soil, noise pollution, biomagnification, eutrophication; Environmental issues: Global warming, acid rain, wetland destruction; Biodiversity: Significance, hotspots in India (Eastern Himalayas, Indo-Burma, Western Ghats, Sundaland), threats to biodiversity, conservation methods (In-situ: National Parks, Sanctuaries, Biosphere Reserves; Ex-	24

UNIT	CHAPTERS & PRESCRIBED TOPICS	MARKS
	situ: Botanical gardens, Zoos, Cryopreservation); Joint Forest Management (JFM) and People's Biodiversity Register (PBR)	

INTERNAL / PRACTICAL ASSESSMENT SCHEME (10 MARKS (PROJECT))

EVALUATION COMPONENT	MARKS WEIGHTAGE
Internal Formative Evaluation (IFE) Specimen observation, biological diagram charting, ecological field study	10 Marks

RECOMMENDED REFERENCE LITERATURE

Prescribed Textbooks: WBBSE Jibon Bigyan o Poribesh Class X, Santra Publication, Excellence Madhyamik Life Science Guide

The Excellence Tuition Edge

Every unit in this curriculum is taught with structured conceptual lectures, followed by weekly speed-testing, detailed mistake analysis, and dedicated 1:1 doubt-clearing sessions to build board exam confidence.

Excellence Tuition Centres: Sarsuna (Opp. High School) · Joka · Chatterjee Para (Behala)

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