

INTEGRATED COURSE YEARLY PLANNER-2022-23 (GRADE-XII) BIOLOGY- NEET
WEEKLY SYLLABUS BREAK-UP

Month	week	Content	DPP	Class -Test	Fortnightly (Dates)	Major Test
APRIL	WEEK-I	Reproduction in organisms: Reproduction, a characteristic feature of all organisms for continuation of species; Modes of reproduction-Asexual and sexual reproduction. Modes-Binary fission, speculation, budding, gem mule, fragmentation; vegetative propagation in plants.	1	1	15-Jul	25-Jul
	WEEK-II	Sexual reproduction in flowering plant: Flower structure- Development of male and female gametophytes, Pollination- types, agencies and examples; Outbreedings devices; Pollen- Pistil interaction; Double fertilization; Post fertilization events- Development of endosperm and embryo.	1	1	29-Jul	29-Aug
	WEEK-III	Development of seed and formation of fruit; Special modes-apomixes, parthenocarpy, polyembryony; Significance of seed and fruit formation.	1	1	17-Aug	26-Sep
	WEEK-IV	Human Reproduction: Male and female reproductive systems; Microscopic anatomy of testis and ovary; Gametogenesis-spermatogenesis & oogenesis; Menstrual cycle.	1	1	29-Aug	31-Oct
MAY	WEEK-I	Fertilization embryo development up to blast cyst formation, implantation; Pregnancy and placenta formation (Elementary idea); Parturition (Elementary idea); Lactation (Elementary idea).	1	1	14-Sep	28-Nov
	WEEK-II	Reproductive health: Need for reproductive health and prevention of sexually transmitted diseases (STD); Birth control – Need and Methods, Contraception and Medical Termination of Pregnancy (MTP); Amniocentesis; Infertility and assisted reproductive technologies – IVF, ZIFT, GIFT (Elementary idea for general awareness).	1	1	30-Sep	26-Dec

	WEEK-III	Heredity and variation: Mendelian Inheritance; Deviations from Mendelism-Incomplete dominance, Co-dominance, Multiple alleles and Inheritance of blood groups, Pleiotropy; Elementary idea of polygenic inheritance; Chromosome theory of inheritance; Chromosomes and genes; Sex determination - in humans, birds, honey bee; Linkage and crossing over; Sex linked inheritance - Haemophilia, Colour blindness; Mendelian disorder in humans - Thalassemia; chromosomal disorders in humans; Down's syndrome, Turner's and Klinefelter's syndromes.	1	1	14-Oct	
JULY	WEEK-I	Molecular Basis of Inheritance: Search for genetic material and DNA as genetic material; Structure of DNA and RNA; DNA packaging; DNA replication; Central dogma.	1	1	31-Oct	
	WEEK-II	Transcription, genetic code, translation; Gene expression and regulation - Lac Operon; Genome and human genome project; DNA-fingerprinting.	1	1	14-Nov	
	WEEK-III	Evolution: Origin of life; Biological evolution and evidences for biological evolution (Paleontological, comparative anatomy, embryology and molecular evidence); Darwin's contribution, Modern Synthetic theory of Evolution.	1	1	30-Nov	
	WEEK-IV & V	Mechanism of evolution - Variation (Mutation and Recombination and Natural Selection with examples, types of natural selection; Gene flow and genetic drift; Hardy - Weinberg's principle; Adaptive Radiation; Human evolution.	2	1	14-Dec	
AUG.	WEEK-I	Health and Disease: Pathogens; parasites causing human diseases (Malaria, Filariasis, Ascariasis, Typhoid, Pneumonia, common cold, amoebiasis, ring worm); Basic concepts of immunology – vaccines Cancer, HIV and AIDs; Adolescence, drug and alcohol abuse.	1	1	30-Dec	
	WEEK-II	Improvement in food production: Plant breeding, tissue culture, single cell protein, Biofortification, Apiculture and Animal husbandry.	1	1	13-Jan	
	WEEK-III	Microbes in human welfare: In household food processing, industrial production, sewage treatment, energy generation and as biocontrol agents and biofertilizers.	1	1	30-Jan	
	WEEK-	Principles and process of Biotechnology: Genetic engineering	1	1	15-Feb	

	IV	(Recombinant DNA technology).				
SEPT.	WEEK-I	Application of Biotechnology in health and agriculture: Human insulin and vaccine production, gene therapy; Genetically modified organisms-Bt crops; Transgenic Animals; Biosafety issues. Biopiracy and patents.	1	1	27-Feb	
	WEEK-III & IV	Organism and population: Habitat and niche, population and ecological adaptations, population interactions, population attributes- growth, birth rate and death rate, age distribution.	2	1		
OCT.	WEEK-I	Ecosystem: Patterns, components, productivity and decomposition, energy flow, pyramids of number, biomass, energy, nutrient cycles, Ecological succession.	1	1		
	WEEK-II	Biodiversity and its Conservation Concept of biodiversity, pattern of biodiversity, importance of biodiversity, loss of biodiversity, biodiversity conservation, hotspots, endangered organisms, extinction, red data book, biosphere reserve, national parks, sanctuaries, and Ramsar sites.	1	1		
	WEEK-III & IV	Environmental Issues Air and water pollution, agrochemicals and their effects, solid waste management, radioactive waste management, green house effect, ozone layer depletion, deforestation.	2	1		