DELHI PUBLIC SCHOOL RANIPUR

SYLLABUS BREAKUP FOR THE ACADEMIC SESSION: 2026-27

CLASS: XII

SUBJECT: BIOLOGY

S.NO.	UNIT	NAME OF THE UNIT	CH. NO.	CHAPTER	PRACTICALS	TENATIVE MONTHS
1	VI	**REPRODUCTION**	1	**SEXUAL REPRODUCTION IN FLOWERING PLANTS** Flower structure; development of male and female gametophytes; pollination - types, agencies and examples; out breeding devices; pollen-pistil interaction; double fertilization; post fertilization events - development of endosperm and embryo, development of seed and formation of fruit; special modes- apomixis, parthenocarpy, polyembryony; Significance of seed dispersal and fruit formation.	Prepare a temporary mount to observe pollen germination	APRIL-MAY
2			2	**HUMAN REPRODUCTION** Male and female reproductive systems; microscopic anatomy of testis and ovary; gametogenesis - spermatogenesis and oogenesis; menstrual cycle; fertilisation, embryo development upto blastocyst formation, implantation; pregnancy and placenta formation (elementary idea); parturition (elementary idea); lactation (elementary idea).	Prepare a temporary mount of onion root tip to study mitosis	
3			3	**REPRODUCTIVE HEALTH** Need for reproductive health and prevention of Sexually Transmitted Diseases (STDs); 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).	Identification of stages of gamete development, i.e., T.S. of testis and T.S. of ovary through permanent slides	

		I WEEKLY TEST 04.05.2026	**Chapter-1: Sexual Reproduction in Flowering Plants**			
4	VII	**GENETICS AND EVOLUTION**	4	**PRINCIPLES OF INHERITANCE AND VARIATION** 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 and honey bee; linkage and crossing over; sex linked inheritance - haemophilia, colour blindness; Mendelian disorders in humans - thalassemia; chromosomal disorders in humans; Down's syndrome, Turner's and Klinefelter's syndromes.	Isolate DNA from available plant material such as spinach, green pea seeds, papaya, etc	JULY-AUGUST
5			5	**MOLECULAR BASIS OF INHERITANCE** Search for genetic material and DNA as genetic material; Structure of DNA and RNA; DNA packaging; DNA replication; Central Dogma; transcription, genetic code, translation; gene expression and regulation - lac operon; Genome, Human and rice genome projects; DNA fingerprinting.	Prepared pedigree charts of any one of the genetic traits such as rolling of tongue, blood groups, ear lobes, widow's peak and colour blindness	
6			6	**EVOLUTION** Origin of life; biological evolution and evidences for biological evolution (palaeontology, comparative anatomy, embryology and molecular evidences); Darwin's contribution, modern synthetic theory of evolution; 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.	Flash cards models showing examples of homologous and analogous organs	
		II WEEKLY TEST 20.07.2026	**Chapter-7: Human reproduction and Reproductive health**			
7	VIII	**BIOLOGY AND HUMAN WELFARE**	7	**HUMAN HEALTH AND DISEASES** Pathogens; parasites causing human diseases (malaria,	Common disease-causing organisms like Ascaris,	AUGUST-SEPTEMBER

				dengue, chikungunya, filariasis, ascariasis, typhoid, pneumonia, common cold, amoebiasis, ring worm) and their control; Basic concepts of immunology - vaccines; cancer, HIV and AIDS; Adolescence - drug and alcohol abuse.	Entamoeba, Plasmodium, any fungus causing ringworm through permanent slides.	
8			8	**MICROBES IN HUMAN WELFARE** Microbes in food processing, industrial production, sewage treatment, energy generation and microbes as bio-control agents and bio-fertilizers. Antibiotics; production and judicious use.		
9	IX	**BIOTECHNOLOGY AND ITS APPLICATIONS**	9 10	**BIOTECHNOLOGY - PRINCIPLES AND PROCESSES GENETIC ENGINEERING** (Recombinant DNA Technology). **BIOTECHNOLOGY AND ITS APPLICATIONS** Application of biotechnology in health and agriculture: Human insulin and vaccine production, stem cell technology, gene therapy; genetically modified organisms – Bt crops; transgenic animals; biosafety issues, biopiracy and patents.		SEPTEMBER-OCTOBER
10	X	**ECOLOGY AND ENVIRONMENT**	11 12	**ORGANISMS AND POPULATIONS** Population interactions - mutualism, competition, predation, parasitism; population attributes - growth, birth rate and death rate, age distribution. (Topics excluded: Organism and its Environment, Major Abiotic Factors, Responses to Abiotic Factors, Adaptations) **ECOSYSTEM** Ecosystems: Patterns, components; productivity and	Study the plant population density by quadrat method. Study the plant population frequency by quadrat method.	OCTOBER

			13	decomposition; energy flow; pyramids of number, biomass, energy **BIODIVERSITY AND ITS CONSERVATION** Biodiversity-Concept, patterns, importance; loss of biodiversity; biodiversity conservation; hotspots, endangered organisms, extinction, Red Data Book, Sacred Groves, biosphere reserves, national parks, wildlife, sanctuaries and Ramsar sites.	Models specimen showing symbolic association in root modules of leguminous plants, Cuscuta on host, lichens	
11		**I PRE-BOARD (NOVEMBER)**	**WHOLE SYLLABUS**			
12		**II PRE-BOARD (DECEMBER)**	**WHOLE SYLLABUS**			