

Academic planner-2024-2025**Biology
CLASS -XII**

Date & number of days	Topics/ Content	Teaching pedagogy	No. Of Assignments /H.W	Activities/practicals
1/4/24-15/4/24	Chapter-1 Sexual reproduction in flowering plants		Assignment questions & from N.C.E.R.T	
No.of days-11	Structure of flower, Pre fertilization	Brainstroming		Pollen germination on stigma through a permanent slide.
	grains, pistil, megasporangium & embryo			Study of flowers adapted to pollination by different agencies
16/4/2024 - 30/4/2024	sac, pollination kinds & agents out breeding			Exercise on controlled pollination emasculation,bagging and tagging
No.of days-11	devices, artificial hybridization, double fertilization, post fertilization events,			To study pollen germination on a slide in nutrient medium
	apomixes & polyembryony.ignificance of seed dispersal and fruit formation.			
1/5/24 - 15/5/24	Chapter 2 Human reproduction		Assignment containing extra	
No.of days-12	Female reproductive system, gametogenesis & menstrual cycle		questions & from	Study of T.S of Blastula through permanent slide
	Fertilization & implantation, Pregnancy &	Direct instruction	Assignment containing extra	Identification of stages of gamete development T.S of testis and T.S of ovary through permanent slide
	embryonic devpt. Parturition & lactation (elementary idea).		questions & from N.C.E.R.T	
	Chapter-3			
16/5/24-25/5/24	Reproductive health, problems & strategies,		Assignment containing extra	
No.of days-6	population explosion& Birth control, medical		questions & from N.C.E.R.T	

	termination of pregnancy (MTP), STDs infertility. infertility and assisted reproductive technologies - IVF, ZIFT, GIFT (elementary idea for general awareness).			
1/7/24-15/7/24	Chapter-4			Study Mendelian inheritance
No.of days-12	Principles of inheritance & variation		Assignment containing	using seeds of
	Mendel's laws ,Incomplete dominance		Problems of genetics & 1	different colours size of any plant.
	Codominance, blood groups, inheritance thallemia,pleiotropy, polygenic inheritance (elementary idea)		from TBQ of Chapter-5	To study prepared charts of any one of the genetic traits such as rolling of tongue, blood groups, ear lobes, widow's peak and colour blindness
	sex determination, mutation, genetic disorders			
16/7/2024	Chapter-5	UTI		
No.of days-13	Molecular basis of inheritance			Isolate DNA from available plant material
	Introduction, DNA, search for genetic material, RNA world, replication, transcription,			
	the genetic code, mutations			Study prepared pedigree
	Chapter-6 Contd.		Assignment on	charts of genetic traits such as
	translation, regulation of gene expression,		problem in genetics	rolling of tongue,blood groups and widow's peek
	human and rice genome project, DNA fingerprinting.			
1/8/2024 - 15/8/2024	Chapter 6 Evolution			
No.of days-11	Evolution of life forms, evidences for evolution, (paleontology, comparative anatomy, embryology and molecular evidences); Darwin's contribution, modern synthetic theory of evolution, brief account of evolution & origin &	Animated videos on evolution would be shown		Flash cards models showing examples of homologous and analogous organs

	mechanism of evolution - variation(mutation and recombination) and natural selection with examples and types of natural selection, gene flow and genetic drift, Hardy Weinberg's principle and adaptive radiation.			
16/8/24 - 31/8/24	Chapter 8			
No.of days-12	Chap. 7 Human health & diseases- Pathogens, parasites causing human diseases and their control, immunology vaccines , cancer, HIV - AIDS, adolescence, drug and alcohol abuse		Assignment containing	
	Common diseases in humans, (malaria, dengue, chickengunia, filariasis, ascariasis, typhoid, pneumonia, common cold, amoebiasis, ring worm) and their control ; immunity.	Padlet and sway making(Microsoft tools)	Extra questions from ch-8	Study common disease causing organisms like Ascaris. Entamoeba, plasmodium any fungus causing ringworm through permanent slides, models or virtual images
	Chap.7 Contd.Basic concepts of immunology - vaccines; cancer, HIV and AIDS; Adolescence - drug and alcohol abuse. Allergies, AIDS, Cancer,Drugs & alcohol abuse.		Assignment containing	Prepare temporary stained mount of onion root tips & study mitosis in them
1/9/2024- 15/9/2024	Revision		Assignments containing	
No.of days-11			extra questions and	To study meiosis in onion bud cell or grasshopper testis through permanent slides
			tests	
16/9/23 - 30/9/23	Term I examination	Term I exams Chapter 2	Term I examination	
No.of days-12				
16/9/24- 30/9/24				
No. of days-12				
1/10/24- 15/10/24	Chapter 8			
No.of days-8	Microbes in Human Welfare	Reciprocated teaching		
	Microbes & Household products, Industria			
	Products, Antibiotics, Microbes & Sewage			
	Treatment & Production of Bio-Gas.			

	Microbes as biocontrol agents & as biofertilisers.		CW-1& assignment from chap. 12	
16/10/24 - 31/10/24	Chapter 9 Biotechnology:Principles & processes Introduction & Revision	Cooperative learning		Isolation of DNA from available plant , material such as spinach, green pea seeds, papaya etc.
No.of days-12	Chap. 9 contd. Principles of biotechnology, tools of rDNA technology			
	Chapter-10 Biotechnology & its applications		Assignments containing	
	Biotechnological applications in agriculture 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, bio piracy and patents.	Story telling		
1/11/24 - 15/11/24	Chapter-11: Organisms and Populations Organisms and environment: Habitat and niche, population and ecological adaptations; population interactions - mutualism, competition, predation, parasitism; population attributes - growth, birth	UT II Chapter 10 & 11	extra questions and	Models specimen showing symbiotic association in root nodules of leguminous plants, cuscuta on host and lichens
No.of days-10		Class Test	Assignment containing	
			extra questions and	
16/11/24 - 30/11/24	Chapter -12 Ecosystem Ecosystem structure & function, productivity, decomposition, enery flow and ecological pyramids		TBQ from ch-14	

No. of days-13				
	decomposition, Energy flow ecological pyramids			Study of plant population density by quadrat method
	of energy, Biomass and number			
	Chapter- 13			
	Chap. 13 Biodiversity & conservation		Assignment	
	Biodiversity types, Patterns, Loss of biodiversity endangered organisms, extinction, Red Data Book, biosphere reserves, national parks sanctuaries and Ramsar sites	Students would be given a field trip		Study of plant population frequency and density by quadrat method
	& its conservation			
			CW-1	
	supplementary text Discussion of CBSE sample papers & other sample papers		Sample papers, revision &	
1/12/24-15/12/24 No. of days - 11	Preboard Examination	Preboard Examination	Preboard Examination	Preboard Examination
16/12/24-31/12/24 No. of days - 13		Entire syllabus		