

	<b>Academic planner-2023-2024</b>			
	<b>Biology</b>			
	<b>CLASS -XII</b>			
<b>Date &amp; number of days</b>	<b>Topics/ Content</b>	<b>Teaching pedagogy</b>	<b>No. Of Assignment s/H.W</b>	<b>Activities/practicals</b>
1/4/23-15/4/23	Chapter-2		Assignment	
	Sexual reproduction in flowering plants		questions & from	
No.of days-9	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
16/4/2023-30/4/2023	sac, pollination kinds & agents out breeding			Excercise on controlled pollination
No.of days-11	devices, artificial hybridization, double fertilization, post fertilization events,			emasculation.bagging and To study pollen germination on a slide in nutrient medium
	apomixes & polyembryony.ignificance of seed dispersal and fruit formation.			
1/5/23 - 15/5/23	Chapter 3 Human reproduction		Assignment containing extra	
No.of days-11	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-4			
	Reproductive health, problems & strategies,		Assignment containing extra	
	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).			
1/7/23-15/7/23	Chapter-5			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 thalassaemia, 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			
16/7/2023	Chapter-6	UTI		
No.of days-12	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 peak
	human and rice genome project, DNA fingerprinting.			
1/8/2023 - 15/8/2023	Chapter 7 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.			
16/8/23 - 31/8/23	Chapter 8			
No.of days-13	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.8 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
1/9/2023- 15/9/2023	Revision		Assignment s 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	<b>Term I examination</b>	<b>Term I exams Chapter 2 to</b>	<b>Term I examination</b>	
No.of days-12				
1/10/23- 15/10/23	Chapter 10			
No.of days-10	Microbes in Human Welfare	Reciprocate d 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	
16/10/23 - 31/10/23	Chapter 11 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-9	Chap. 11 contd. Principles of biotechnology, tools of rDNA technology			
	Chapter-12 Biotechnology & its applications		Assignment s 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		
1/11/23 - 15/11/23	Chapter-13: Organisms and Populations Organisms and environment: Habitat and niche, population and ecological adaptations; population interactions - mutualism, competition, predation, parasitism; population attributes - growth, birth rate and death rate, age distribution Organisms & its environment Populations growth,	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-9		Class Test	Assignment containing	
			extra questions and	
16/11/23 - 30/11/23	Chapter -14		TBQ from ch-14	
No.of days-12	Ecosystem structure & function, productivity			

	decomposition, Energy flow ecological pyramids			Study of plant population density by quadrat method
	of energy, Biomass and number			
	Chapter- 15			
	Biodiversity & conservation		Assignment	
	Biodiversity types, Patterns, Loss of biodiversity endangered organisms, extinction, Red Data Book, biosphere reserves, national parks, sanctuaries and Ramsar sites & its conservation	Students would be given a field trip		Study of plant population frequency and density by quadrat method
			CW-1	
	supplementary text Discussion of CBSE sample papers & other sample papers		Sample papers, revision &	
1/12/23-15/12/23 No. of days - 12	<b>Preboard Examination</b>	<b>Preboard Examination</b>	<b>Preboard Examination</b>	<b>Preboard Examination</b>
16/12/23-31/12/23 No. of days - 13		<b>Entire syllabus</b>		