

# ANNUAL PLAN BIOLOGY

## IGCSE LEVEL-2

### SESSION 2023-24

<b>MONTH</b>	<b>TOPIC</b>	<b>CONCEPT</b>	<b>LEARNING OBJECTIVES</b>
<b>MARCH</b>	CHAPTER 14 Reproduction in plants	14.1 Asexual mode of reproduction	Various methods of asexual reproduction will be comprehended by the students'
		14.2 Sexual mode of reproduction	Sexual reproduction will be comprehended by the students.
		14.3 Pollination and fertilization	Students will be able to describe the various reproductive parts of the flower. The students will be able to understand the process of pollination and fertilization in plants.
<b>APRIL</b>	CHAPTER 15 Reproduction in humans	15.1 Male reproductive system	Students will be able to describe the role of various parts of male reproductive system.
		15.2 Female reproductive system	Students will be able to describe the role of various parts of female reproductive system.
		15.3 Human gametes and fertilization	Students will be able to describe the structure and role of gametes in the process of reproduction.

		15.4 Placenta and amniotic sac	Students should be able to outline the role of placenta and amniotic sac in a developing fetus.
		15.5 Menstrual cycle	Students should be able to comprehend the stages of menstrual cycle.
		15.6 Sexually transmitted infections	Students should be able to list the reasons and symptoms of sexually transmitted infections.
<b>MAY</b>	CHAPTER 16 Chromosomes, genes and proteins	16.1 Chromosomes and cell division	Students should be able to label the parts of chromosome and their role in division of a cell.
		16.2 Mitosis	Students should be able to comprehend and explain the stages of mitosis.
		16.3 Meiosis	Students should be able to comprehend and explain the stages of meiosis.
		16.4 Genes and alleles	Students should be able to differentiate between genes and alleles.
		16.5 Genotype and phenotype	Students should be able to differentiate between genotype and phenotype.
		16.6 Codominance and pedigree diagrams	Students should be able to describe codominance and its implications.

		16.7 Sex determination	Students should be able to comprehend the process of determination of gender at the time of fertilization.
		16.8 Protein synthesis	Students should be able to comprehend the process of synthesis of proteins.
<b>JULY</b>	CHAPTER 17 Variation and Selection	17.1 Continuous and Discontinuous variation	Students should be able to differentiate between continuous and discontinuous variations.
		17.2 Causes of genetic variations	Students should be able to state the reasons of variations among individuals.
		17.3 Natural selection	Students should be able to comprehend the process of survival of fittest and natural selection.
		17.4 Selective breeding	Students should be able to differentiate between natural selection and selective breeding.
	CHAPTER 18 Organisms and environment	18.1 Energy flow and food webs	Students should be able to state the process of flow of energy in the ecosystem.
		18.2 Energy losses and trophic levels	Students should be able to state the trophic levels for the flow of energy in the ecosystem.

		18.3 Pyramid of biomass	Students should be able to calculate the energy in a biomass.
		18.4 Nutrient cycles	Students should be able to define and draw the nutrient cycles.
		18.5 Populations and factors affecting populations	Students should be able to state the factors which affect the size of populations.
<b>AUGUST</b>	CHAPTER 19 Human influences on environment	19.1 Human pressures on ecosystem	Students should be able to comprehend how humans have increased food production, and how this can affect the ecosystem.
		19.2 Intensive livestock production	Students should be able to comprehend how livestock production can be increased.
		19.3 Habitat destruction	Students should be able to reason why habitats have been destroyed.
		19.4 Pollution by greenhouse effect	Students will be able to state the examples of pollution and their effects.
		19.5 Eutrophication	Students should be able to define and comprehend eutrophication.
		19.6 Conservation of forests	Students would be able to state the need and importance of conservation of forests.

	CHAPTER 20 Biotechnology and genetic modification	20.1 Using microorganisms for biotechnology	Students would be able to state how microorganisms can be utilized for genetic engineering.
		20.2 Making use of enzymes	Students would be able to state how enzymes can be utilized for genetic engineering.
		20.3 Genetic modification	Students would be able to state the need and importance of genetic modification of organisms.
<b>SEPTEMBER</b>	<b>MOCK EXAM</b>		
			Thereafter revision through past papers and mock exam depending upon series opted by a student.