COMMECS COLLEGE

Subject: Botany (Biology)
HOD: Ms. Sana Noman **Macro Plan (2025-2026)**
Teacher/Prepared by: Abdul Samad/Muhammad Umer **Class: XI-PM**

Start Date	End Date	Number of Periods	Topic/Chapter	Contents	Objectives By the end of the unit S.W.A.T.:
FIRST TERM					
01 Aug 2025	15 Aug 2025	4	Foundation Course	1. Introduction to botany and branches 2. Plant cell Structures organelles 3. Plant tissues, photosynthesis overview 4. Nutrition, Kingdom plantae overview 5. structure of leaf, water & mineral transport 6. practical skills and revision	1. help student understand The basic definitions and importance of biology botany Physiology taxonomy ecology 2. Identify plant cell parts compare plant and animal cell 3. Define plant issues and its types 4. Define photosynthesis and write its equation 5. Differentiate between autotrophic and heterotrophic nutrition
18 Aug 2025	13 Sept 2025	9	Chapter# 3 Cell structure & Functions	1- Cell as basic unit of life, cell theory, Microscope 2-Techniques to Isolate Components of Cell. Prokaryote& Eukaryotes 3-Prokaryote& Eukaryotes 4-General Structure of Eukaryotic Cell 5-Cytoplasmic organelles & membrane system. 6-Non-membrane bond	1-Create the interest by studying cell theory with the illustrated microscopic structures of the cell organelles. 2-Define the terms of Prokaryotes & Eukaryotes 3-Understand the general structure of cytoplasmic organelles. 4-Discuss the difference

				organelles 7-Key points 8-Exercise	b/w non-membrane & membrane bounded organelles.
15 Sept 2025	06 Oct 2025	10	Chapter # 04 Bioenergetics	1-Need for energy in living organisms. 2-Reactants and Products of Photosynthesis with the role of chlorophyll 3-Process of Photosynthesis with the light dependent reaction 4-Formation of ATP with light dependent reaction. 5-Cellular respiration with the process of Glycolysis. 6-Kreb's Cycle 7-The process of Electron Transport System. 8-Energy Flow Through the Ecosystem 9-The Efficiency of Energy flow 10-Key Points and exercise	1-Determine the level of energy in the different phases of photosynthesis. 2-Understand both the processes of light reactions. 3-Comprehend the process of Glycolysis by which cellular respiration is done. 4-Describe the process of transportation of energy from ATP to the required places. 5-Understand that how sunlight is used as a source of energy in the process photosynthesis. 6-Describe the trophic levels
13 Oct 2025	31 Oct 2025	8	Chapter #5 A-Cellular Life	1-Concept of Species 2- Hierarchy of Biological classification. 3-The five kingdom system of classification 4-Viruses with characteristics, structure& classification 5-Life cycles of Bacteriophage 6-Viral diseases-HIV &	1-Clearify the concept of discovered species in accordance with the classification. 2-Distinguish the all five kingdoms with their characteristics. 3-Discuss different viral diseases.

				AIDS 7- key points & Exercise 1-Bacteria with structures	
03 Nov 2025	28 Nov 2025	10	Chapter # 6 Prokaryotes	1- Shapes, <u>Diversity & occurrences</u> 2-Nutrition in Bacteria 3- Growth, Respiration & Reproduction 4- Importance & control, Immunization & Vaccination. 5-Cyanobacteria with characteristics & Importance 6-Key points and Exercise	1-Understanding the different cellular structures of bacteria. 2- Understanding different types of bacteria. 3-Understand the importance of Immunization & Vaccination. 4- understanding cyanobacteria and its importance
01 Dec 2025	15 Dec 2025		**Mid Term Examination**		
	Total	41	Till Mid terms Teaching days = 82 (Botany = 41), (Zoology = 41) Class Conducted = 61. 65%		

29 Dec 2025	23 Jan 2026	8	Chapter # 7 Protoctista & Fungi	1-Diversity among Protista with groups, Plant like Protista 2-Fungi like Protista 3-The body of Fungus with Nutrition 4-Reproduction in Fungi, Classification of Fungi. 5- Land adaptations of Fungi. 6-Economic Importance of Fungi. 7-Classification of Fungi. 8- Land adaptations of Fungi. 9-Economic Importance of Fungi. 10-Key Points & Exercise.	Define different botanical terms of plant and fungal like Protoctista. Make out the major points of all type Protoctista. Define the diversity of 3-type of Protista. Explain life cycles. Understand the land adaptation of Fungi. Describe the economic importance of Fungi. Understanding mode of reproduction in fungi
26 Jan, 2026	28 Feb, 2026	11	Chapter # 8 Diversity Among Plants	1-Classification of Plants with Bryophytes' Characteristics & life cycle of Moss 2-Adaptations to Land Habitat & Three Divisions of Bryophytes. 3-Tracheophytes with major groups of vascular plants 4-Evolution of the Leaf 5- Lycopsida 6-Evolution of Seed. 7-Sphenopsida, Pteropsida 8- Life Cycle of Fern. 9-Spermopsida: The Gymnosperm with the life cycle of Pine. 10-The Angiosperm 11-The Life Cycle of an Angiosperm 12-Vascular Plants as successful group of Land Plants.	1-Define the main characteristics of adaptations to Land Habitat of lower plants. 2-Comprehend the evolution of vascular plants. 3-Make out that seed has the features of an embryo. 4- Comprehend the evolution of vascular plants. 5-Make out that seed has the features of an embryo. 6-Understand the evolution of plants 7-Understand the comparisons among all Spermopsida. 8-Make out the difference b/w the life cycle of Angiosperm and Gymnosperm.

				16- Key Points & Exercise	9-Define that successful group of Land Plants.
02 Mar 2026	20 Mar, 2026	07	Chapter # 10 Form & Functions in Plants	1-Autotrophic and Heterotrophic Nutrition 2-Special Mode of nutrition in plants 3-Mineral Nutrition 4-Gaseous Exchange in plants 5-Transport in plants 6-Water status in plants with osmotic potential 7-Water and minerals uptake by root 8-Transpiration 9-Translocation of organic solutes	1-Describe the process of nutrition 2- Define respiratory system of Plants. 3-Explain different respiratory mechanisms in plants. 4-understand the water status in plants 5-understand water and minerals up taking by roots 6-comprehend translocation in plants
23 Mar 2026	11 April 2026		**Preliminary Examination**		
	Total	26	Till Mid terms Teaching days = 82+51 (Botany = 41+26), (Zoology = 41+25) Class Conducted = 100%		