

Number of
Lectures (30)

Biology 1st Paper (Botany)
Table of Contents

Chapter-1: Cell and it's Structure

Lecture-1 Structure of Plant Cell, Animal Cell, Differences of Plant Cell & Animal Cell and All Short Questions upto Nucleic Acid. Discussion on S/Q and MCQs. Model CQ, Procedure of Writing the answer and CQ Practice.

Lecture-2 Structure of Cell Wall, Various model of Cell membrane, Differences between Cell wall and Cell membrane. All short Questions (SQ) and MCQ and CQ Practice.

Lecture-3 Structure of Mitochondria, Chloroplast, Ribosome, Golgi body. MCQ and CQ Practice on Lecture 1, 2 and 3.

Lecture-4 : Structure of chromosome, Centriole, Nucleus, ER
Final MCQ Practice on chapter-1.1

Lecture-5 Structure of DNA, RNA, Types of RNA, Differences of DNA and RNA. All Short Questions (SQ) and MCQs

Lecture-6 Process of Replication, Transcription and Translation including splicing and Genetic code. All short Questions and MCQs and Model CQs

Chapter two- (Cell Division)

Lecture-1 Cell cycle and Mitosis Cell division, Importance of Mitosis Cell division. MCQ, SQ and Model CQ Practice.

Lecture-2 Meiosis Cell division, Importance, All short Questions and MCQs on Lecture-1 and Lecture-2

Lecture-3 Lecture-3: Crossing over and it's importance. Final MCQ Practice and discussion on Creative Questions.

Chapter-4 (Micro-organism)

Lecture-1 Virus, Structure of T₂ Virus, TMV virus, Classification of Bacteria, Typical Structure of Bacteria and Bacterial Reproduction.

	All Related MCQs and Short Questions
Lecture-2	Multiplication process of T ₂ Virus, Lamda Phage. All Related MCQs & Short Questions. MCQ, CQ, SQ Practice
Lecture-3	Economic Importance of virus & Bacteria. Differences of virus and Bacteria. viral and Bacterial diseases, symptoms & Treatment. All Related MCQs & Short Questions. MCQ, CQ, SQ Practice
Lecture-4	Malaria, species of Malarial parasite, Hepatic and Erythrocytic schizogony. Symptoms and Treatment of Malaria fever. All S/Q and MCQ on Lecture-4
Lecture-5	Sexual Reproduction and Alternation of Generation of Malarial parasite. Importance of two host in the life history and control of Malaria. All S/Q & MCQ on Lecture-5
Chaptere-7(Gymnosperm and Angiosperm)	
Lecture-1	General characteristics of Gymnosperm. Genaral charaderistics of Angiosperm. Differences of Gymnosperm and Angiosperm. Types of Root, Leaf, flower, Placentation, Aestivation. Question-Answer session on Lecture -1. MCQ, CQ & SQ Practice
Lecture-2	Continuation of Lecture -1 and inflorescence. All S/Qs, MCQs
Lecture-3	Structur of cycas plant, Structure of Micro and Megasporophyll, Sexual Reproduction in Cycas. All S/Qs and Explanations, MCQs on Lecture-3.
Lecture-4	Floral formula, floral diagram (with Explanations, family and Plant characteristics of family- Malvaceae; Economic Importance, Q-A Session on Technical Topic on Lecture-4.
Lecture-5	Floral formula, floral Diagram, family and Plant characteristics Economic Importance of family Poaceae.
Chapter-8 (Tissue and Tissue System)	
Lecture-1	Meristematic and permanent Tissue (Generat chareacteristics and difference) Classification of Meristematic and Permanent Tissue. Discussion on MCQ and SQ
Lecture-2	Tissue systems; Vascular Tissue System, Types of Vascular Tissue System. SQ, CQ and MCQ Practice.

Lecture-3	Features of Monocot and Dicot Root, stem, Leaf, flower, fruits, (Differences of Monocot and dicot Plant) Cross section of Root [Monocot and dicot] and Explanations/chareacteristics. Cross Section of Stem (Monocot & Dicot) and Explanations/Chareacteristics. Discussion on S/Q, MCQ, CQ
Lecture-4	Differences of Monocot and Dicot – Root/stem Structure of stomata and Hydrathode. Model CQ, Procedure of Writing and CQ Practise
Chapter-9 (Plant Physiology)	
Lecture-1	Micro and Macro nutrients. Absorptions Theories Of Nutrition/Ions S/Q-Analyses and MCQs.
Lecture-2	Photo phosphorylation (cyclic and Non cyclic) Cyclic and Non-cyclic (differences) S-Q Analyses, procedure of Writing the Answer and CQ Practice.
Lecture-3	Enzymes. Naming of Enzymes, stomata, Theories of opening and closing of stomata, Transpiration, Types of Transpiration, Photo-synthesis, Respiration, Importance of Transpiration, Photosynthesis. Respiration, R.Q, Stomatal clock.
Lecture-4	C ₃ -Cycle. C ₄ -Cycle, Differences in C ₃ and C ₄ plants/ C ₃ and C ₄ Cycle (differences); CQ- discussion, S/Q-Analyses and MCQs.
Lecture-5	Glycolysis, Kreb's Cycle. Summery on lecturee (1-5) and Calculation of ATP Production after Respiration. CQ- discussion, S/Q-Analyses and MCQs.
Chapter-11 (Biotechnology)	
Lecture-1	Tissue culture, types of Tissue culture, scope of Tissue Culture. Requirements of Tissue culture process, Steps of Tissue Culture, Importance of Tissue culture. S.Q and MCQ Practice.
Lecture-2	Recombinant DNA, formation process and Requirements, Scope, Steps of Insulin production, transgenic plant, Transgenic Animal, Importance and Biosafety Regulations, Overe all CQ, MCQ and SQ Practice.