

Lesson Plan

Name of the Faculty : Dr Vikas Sharma

Discipline : Biotechnology Engineering

Semester : Second

Subject : Biology (B-24 BSC-106)

Duration : 15 Weeks

****Work Load (Lecture/Practical) per week (in hours): L-3, T-0, P-0**

Week	Theory	
	Lecture Day	Topic(including assignment /test)
1 st	1 st	Introduction to living world: Concept and definition of biology Characteristics features of living organisms;
	2 nd	Cell ultra structure and functions of cell organelles, Endoplasmic reticulum and Nucleus
2 nd	3 rd	Difference between prokaryotic and eukaryotic cell; Difference between animal and plant cell
	4 th	Classification of Organism: Classification of the organisms on the basis of Carbon, Energy
3 rd	5 th	Classification of the organisms on the basis of Nitrogen Excretion and Habitat
	6 th	Introduction to Biomolecules: Definition, Classification and important functions of carbohydrates, proteins.
4 th	7 th	Definition, Classification and important functions of nucleic acids (DNA and RNA Structure and forms) and lipids
	8 th	Enzymes as Biocatalysts: General characteristics, nomenclature and classification of Enzymes.
5 th	9 th	Effect of temperature, pH, enzyme and substrate concentrations on the activity of enzymes. Elementary concept of coenzymes.
	10 th	Mechanism of enzyme action
6 th	11 th	Genetics: Mendel's Law of inheritance. Cell Division:- Mitosis
	12 th	Cell Division : Meiosis and its significance
7 th	13 th	Genetic Disorders: Single gene disorders in human.
	14 th	Genetic Disorders: Multiple gene disorders in human.
8 th	15 th	Human traits: Genetics of blood groups, diabetes type I
	16 th	Diabetes type II.
9 th	17 th	Concepts of Genetic Engineering: Definition: Tools used in recombinant technology: Enzymes
	18 th	Tools used in recombinant technology: Vectors
10 th	19 th	Tools used in recombinant technology: Vectors
	20 th	Passenger DNA
11 th	21 th	Passenger DNA

	22 nd	Role of Biology in Agriculture
12 th	23 rd	Role of Biology in Medicine
	24 th	-do-
13 th	25 th	Role of Biology in Forensic science
	26 th	Role of Biology in Bioinformatics
14 th	27 th	-do-
	28 th	Revision of Unit 1, Revision of Unit 2
15 th	29 th	Revision of Unit 3, Revision of Unit 4
	30 th	Class Test

Dr. Vikas Sharma
(Asst. Prof.)