

DEPARTMENT OF MOLECULAR BIOLOGY & BIOTECHNOLOGY
LESSION PLAN
SESSION 2023-24
SEMESTER – II

NAME OF TEACHER: MS. UPASANA DAS

PAPER ALLOTTED: MBBCOR202T/MBBMIN202T (CELL BIOLOGY AND GENETICS -THEORY)

Month	Paper	Topic	No. of classes
May 2024 (04.05.2024)	MBBCOR202T OR MBBMIN202T	Unit 2: Basic Microbiology: Introduction to microbiology; general concepts on microbes and their distinctive characters;	4
June 2024	MBBCOR202T OR MBBMIN202T	Morphology of bacteria; Physical conditions required for growth (temperature, oxygen, and pH); Basic nutritional requirements for growth (carbon source, nitrogen source),	6
July 2024	MBBCOR202T OR MBBMIN202T	Basic nutritional requirements for growth (other growth factors like vitamin source, or any special requirement). Unit 3: Mendelian Genetics: Mendel's Principles of inheritance; Law of Segregation, Law of Independent Assortment.	6
August 2024		Internal Examination & Class for Slow Learners	4
		END SEMESTER EXAMINATION	
Total Classes			20

NAME OF TEACHER: DR. INDRANI DATTA

PAPER ALLOTTED: MBBCOR202T/MBBMIN202T (CELL BIOLOGY AND GENETICS -THEORY) & MBBCOR202P/MBBMIN202P (CELL BIOLOGY AND GENETICS -PRACTICAL)

Month	Paper	Topic	No. of classes
May 2024 (04.05.2024)	MBBCOR202T OR MBBMIN202T	<p align="center">Unit 1: Cell Biology:</p> <p align="center">Cells as basic functional unit of life, classification of organisms by cell structure.</p> <p align="center">Structure of prokaryotic cell, Gram staining, bacterial cell wall (gram positive & gram negative), prokaryotic cell membranes, cytoplasm, ribosomes, nucleoid.</p> <p align="center">Structure, chemical composition and functions of eukaryotic cell membrane, Fluid Mosaic model of plasma membrane, Passive and active transport, Endocytosis and Exocytosis.</p>	6
	MBBCOR202P OR MBBMIN202P	Project work	12
June 2024	MBBCOR202T OR MBBMIN202T	<p align="center">Structure and functions of different cell organelles: Cytoskeleton, Nucleus, Endoplasmic reticulum, Golgi apparatus, Mitochondria, Chloroplast, Lysosome and Peroxisome.</p> <p align="center">Unit 4: Microbial Genetics (10 hours): Genetic recombination in bacteria</p>	6
	MBBCOR202P OR MBBMIN202P	Simple staining of bacteria. Gram staining of bacteria.	16
July 2024	MBBCOR202T OR MBBMIN202T	Mechanism of bacterial transformation, conjugation (Discovery, F factor, <i>Hfr</i> and <i>F'</i> strains) and transduction (Generalized transduction and Specialized transduction).	6
	MBBCOR202P OR MBBMIN202P	Negative staining of bacteria using nigrosin. Determination of relative sizes of nucleus and cytoplasm of squamous cells.	16
August 2024		Internal Examination & Class for Slow Learners	4
		END SEMESTER EXAMINATION	
Total Classes			66