Lab

S. No.	NAME OF THE LABORATORY
1.	Biochemistry Laboratory
2.	Microbiology Laboratory
3.	Cell Biology Laboratory
4.	Bioorganic Chemistry Laboratory
5.	Instrumental Methods of Analysis Laboratory
6.	Chemical Engineering Laboratory
7.	Bioprocess Laboratory – I
8.	Molecular Biology Laboratory
9.	Bioprocess Laboratory – II
10.	Genetic Engineering Laboratory
11.	Downstream Processing Laboratory
12.	Immunology Laboratory
13.	Preparative and Analytical Techniques in Biotechnology
14.	Microbial and Immunotechnology Laboratory
15.	Advanced Molecular Biology & Genetic Engineering Laboratory
16.	Advanced Bioprocess and Downstream Processing Laboratory

List of Major Equipments

S. No	Name of the Equipment	Description of the Equipment	Quantity
1.	Fluorescent microscope Phase Contrast Microscope	To visualise living cells and cell organelles that cannot be viewed by bright field spectroscopy	1
2.	Steam Sterilizers (Autoclave)	Sterilisation and pre-disposal treatment	3
3.	Spectrophotometer	Used to estimate the concentration of analyte in Visible range using the principle of photometry	6
4.	UV Spectrophotometer	Used to estimate the concentration of analyte in the UV	2

		range using the principle of photometry	
5.	Orbital Shaker	To facilitate growth of microbial culture under aeration and agitation	4
6.	Micro-centrifuge	Mechanical device that uses centrifugal force to separate materials of different densities	3
7.	Bioreactors (Automatic, *In-situ* Sterilizable)	Fermentation studies – Production of Primary and Secondary metabolites	4
8.	Gel Documentation system	Widely used in molecular biology for imaging and documentation of nucleic acids and proteins	1
9.	SDS – PAGE Electrophoresis	To determine molecular weight and purity of protein samples	1
10.	Ultra – Sonicator	Most effective unit for nano particle application – Particle synthesis and precipitation	1
11.	PCR (Thermal Cycler)	Commonly used for amplifying segments of DNA	1
12.	ELISA Reader	Designed for measuring antigen - antibody presence	1
13.	Automatic Micro plate washer	*Microplate washers* are used in many *applications* such as ELISA, cell-based	1

		assays and microsplate based assays.	
14.	Ice flake machine	To make ice flakes required for storing biological samples	1
15.	High Speed centrifuge	To separate large volumes of samples with high angular velocities for separation using the principle of centrifugation	1
16.	Electroporation system	Mechanical method to introduce polar molecules into a host cell	1
17.	High Pressure Cell Disruptor (French Pressure Cell)	Equipment used for disruption of Cell of various types, such as Plant and Microbial cells	1
18.	Microfiltration / Ultrafiltration module	Separation process for purifying and concentrating macromolecular solutions.	1
19.	HPLC System	Advance Chromatographic system can be used in both qualitative and quantitative applications	1
20.	Freeze – Dryer (Lyophilizer)	Technique used to remove solvents and dehydrate cells – useful for storage	1