



Course Code	PS01CBIT55	Title of the Course	LAB-I
Total Credits of the Course	04	Hours per Week	04

Course Objectives:	<ol style="list-style-type: none"><li>1. To learn qualitative analysis of carbohydrates, amino acids.</li><li>2. To learn fundamentals of mitosis and meiosis.</li><li>3. To learn operate standard microscope and understand working of Fluorescence and Phase contrast microscopy.</li></ol>
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### PS01CBIT55 (Lab 2 A)

1. Qualitative analysis of carbohydrates
2. Qualitative analysis of amino acids
3. Titration of amino acids and determination of pKa value.
4. Quantitative estimation of amino acids
5. To study various stages of mitosis and meiosis in plant cells.
6. To study different cell organelles (Mitochondria, chloroplasts, lysosomes).
7. Growth curve of yeast cells.
8. Cell counting and Viability assay using Trypan blue.
9. Demonstration of various types of Microscopy (Fluorescence, Phase-contrast)

### PS01CBIT55 (Lab 2B)

Practicals related to elective papers

Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Practical Examination (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Practical, Viva-voce, Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learner will be able to	
1.	Carry out fundamental Cell Biology and Biochemistry experiments.
2.	Culture and maintain various types of microbes in the lab.





	, carry out cellular analysis.
3	Do biochemical estimations using uv/visible spectroscopy.

References:

1	Thimmaiah S. K. (2012). Standad Methods of Biochemical Analysis. Kalyani Publishes, New Delhi, India.
2	Biochemical Calculations: How to Solve Mathematical Problems in General Biochemistry, 2nd Edition Irwin H. Segel

