

Curriculum Planner
(Department of Botany, Kalindi College)
Dr. Priyanka Verma (2024-2025)

Course: B.Sc. Life
Science Semester: V
Paper: Plant Physiology and Metabolism Practical

Topic	Reference	Approximate (schedule)
<p>Practicals 60 hours</p> <ol style="list-style-type: none"> 1. Determination of osmotic potential of plant cell sap by plasmolytic method. 2. To study the effect of the environmental factor light on transpiration by excised twig. 3. Calculation of stomatal index and stomatal frequency of a mesophyte and a xerophyte. 4. To study the activity of catalase and study the effect of pH on the activity of enzyme. 5. To Study Hill's reaction. 6. To study the effect of light intensity on O₂ evolution in photosynthesis. 7. Comparison of the rate of respiration in any two parts of a plant. 8. To separate photosynthetic pigments by paper chromatography. 9. Bolting / Effect of auxins on rooting. 10. To demonstrate the delay of senescence by cytokinins/ effect of ethylene on fruit ripening 11. To study the phenomenon of seed germination (effect of light and darkness). 12. To demonstrate Respiratory Quotient (RQ) 	<p>Taiz, L., Zeiger, E., Moller, I. M., Murphy, A. (2018). Plant Physiology and Development, International 6th edition, Oxford University Press, Sinauer Associates, New York, USA.</p> <ul style="list-style-type: none"> • Bajracharya, D. (1999). Experiments in Plant Physiology: A Laboratory Manual, Narosa Publishing House, New Delhi. • Hopkins, W. G., Huner, N. P. A. (2009). Introduction to Plant Physiology, 4th edition, Wiley India Pvt. Ltd, New Delhi. • Kochhar, S.L. & Gujral, S.K. 2020. Plant Physiology: Theory and Applications, 2nd Edition. Cambridge University Press, UK. 	<p>August 2024- December 2024</p>

