Curriculum Planner

(Department of Botany, Kalindi College)

**Course** : **B. Sc. (Prog.) Life Science**

**Semester** : **III ;**

**Paper** : **Plant Anatomy and Embryology Practicals**

**Name of the Teacher: Dr. Sanavar Soham**

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| Topic | Approximate (schedule) |
| 1. Study of meristems through permanent slides and photographs. 2. Tissues (parenchyma, collenchyma and sclerenchyma); Macerated xylary elements, Phloem (Permanent slides, photographs) 3. Stem: Monocot: *Zea mays*; Dicot: *Helianthus*. 4. Root: Monocot: *Zea mays*; Dicot: *Helianthus*. 5. Leaf: Dicot and Monocot (only Permanent slides). 6. Adaptive anatomy: Xerophyte (Nerium leaf); Hydrophyte (Hydrilla stem). 7. Structure of anther (young and mature). 8. Types of ovules: anatropous, orthotropous, circinotropous, amphitropous/ campylotropous. 9. Female gametophyte: Polygonum (monosporic) type of Embryo sac (Permanent slides/photographs). 10. Pollination types and seed dispersal mechanisms (including appendages, aril,caruncle) Photographs/specimens). 11. Dissection of embryo/endosperm from developing seeds. 12. Calculation of percentage of germinated pollen in a given medium. Mock Test and Revision of selected topics . | August 2022September 2022September 2022September 2022October 2022October 2022October 2022November 2022November 2022November 2022November 2022November 2022December 2022 |

Suggested Readings

1. Bhojwani, S.S., Bhatnagar, S.P. (2011). Embryology of Angiosperms, 5th edition. New Delhi, Delhi: Vikas Publication House Pvt. Ltd.

2. Dickison,W.C.(2000). Integrated Plant anatomy. Cambridge, U.K.: Academic press Inc.

3. Fahn, A. (1982). Plant anatomy. Oxford, U.K.: Pergamon Press.

4. Mauseth, J.D. (1988). Plant Anatomy. San Francisco, California: The Benjamin/Cummings Publisher.

5. Raven P., Frankin, E.R., Susan, E.E. (2005). Biology of plants, 7th edition. New York, NY: W. H. Freeman.