

Brief Table of Contents

UNIT I	Structure and Information Systems of Plant Cells	1
CHAPTER 1	Plant and Cell Architecture	3
CHAPTER 2	Cell Walls: Structure, Formation, and Expansion	45
CHAPTER 3	Genome Structure and Gene Expression	73
CHAPTER 4	Signals and Signal Transduction	103
UNIT II	Transport and Translocation of Water and Solutes	151
CHAPTER 5	Water and Plant Cells	153
CHAPTER 6	Water Balance of Plants	169
CHAPTER 7	Mineral Nutrition	189
CHAPTER 8	Solute Transport	217
UNIT III	Biochemistry and Metabolism	245
CHAPTER 9	Photosynthesis: The Light Reactions	247
CHAPTER 10	Photosynthesis: The Carbon Reactions	281
CHAPTER 11	Photosynthesis: Physiological and Ecological Considerations	321
CHAPTER 12	Translocation in the Phloem	345
CHAPTER 13	Respiration and Lipid Metabolism	379
CHAPTER 14	Assimilation of Inorganic Nutrients	417
CHAPTER 15	Abiotic Stress	443
UNIT IV	Growth and Development	473
CHAPTER 16	Signals from Sunlight	475
CHAPTER 17	Seed Dormancy, Germination, and Seedling Establishment	505
CHAPTER 18	Vegetative Growth and Organogenesis: Primary Growth of the Plant Axis	541
CHAPTER 19	Vegetative Growth and Organogenesis: Branching and Secondary Growth	567
CHAPTER 20	The Control of Flowering and Floral Development	591
CHAPTER 21	Sexual Reproduction: From Gametes to Fruits	625
CHAPTER 22	Embryogenesis: The Origin of Plant Architecture	669
CHAPTER 23	Plant Senescence and Developmental Cell Death	691
CHAPTER 24	Biotic Interactions	721