

**Programme Name and Code: Botany Minor Elective Paper for Other Faculties PG
Semester-I**

Course code and Name: BOT EPI – Elementary Botany

MM: 25+75=100

Objectives:

- A holistic development and academic excellence to contribute effectively to the understanding of the subject Botany.
- To develop an aptitude towards science and nature.
- To equip the students with the basic skills in identifying different plants and their values in life.

Unit	Credit	Hours
Unit 1-Botanical World 1. The Living World: Five Kingdoms 2. Biological classification and taxonomy: Ranks, Binomial Nomenclature 3. Plant Kingdom: Cryptogams, Phanerogams	1	15
Unit 2- Plant Structure 1. Morphology of flowering plants: Root, Stem, Leaves, Flower, Fruit, Seed 2. Anatomy of flowering plants: Plant tissues, T.S. Root, Stem and leaves of Dicot and Monocot 3. Cell biology: Plant cell, differences from animal and bacterial cells	1	15
Unit 3-Plant Functions 1. Plant Physiology: SPAC, Photosynthesis, Respiration, Plant growth and hormones 2. Reproductive biology of Flowering plants: Asexual and Sexual reproduction 3. Genetics- Mendel's Laws, Chromosomes, Gene	1	15
Unit 4- Plants and Human welfare 1. Ecology and Environment: Structure and functions of Ecosystem 2. Economically important plants: Food grains, Fibres, Medicinal plants 3. Plant Biotechnology- Tissue culture, Genetic Engineering	1	15

INTERNAL ASSESSMENT

Attendance: 5 ; Assignment / Presentation: 5; Midterm test: 15

TRANSACTIONAL STRATEGIES

Lectures, tutorials, demonstrations, teaching tools (photographs, models, charts, etc.), OERs, digital libraries, etc

LEARNING OUTCOMES:

After completions of this course students will be able to learn about the world of plants. They will understand the natural and economic value of different plants.

REFERENCE BOOKS

- Gangulee, H.C. and Kar, A.K.(2011). College Botany Vol.I, II and III. New Central Book Agency (P) Ltd., Kolkata.
- Kochhar, S.L. (2019). Economic Botany in the Tropics. Laxmi Publications, New Delhi.
- NCERT books for Biology (Class 11th and 12th). <https://www.ncertbooks.guru>
- Odum, E.P. and Barrett, G.W. (2020). Fundamentals of Ecology (5th Edition). Cengage Learning Publishers, India
- Raven, P. and Johnson, G. (2020). Biology. McGraw Hill Education, India.
- Taylor, M.R., Dickey, J.L., Simon, E.J., Hogan, K. and Reece, J.B. (2017). Campbell Biology: Concepts and Connections. Pearson, New York.

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Nishu
14/12/2022