**COURSE OUTCOMES**

**B.Sc – Botany IInd year**

**Semester- III**

 **Subject: Biology and Diversity of Seed Plant-1(Theory & Practical)**

|  |  |
| --- | --- |
| **Co**1 | Discribe the General characters and diversity of Gymnosperms and Classification of Gymnosperms |
| **Co 2**  | Discuss Geological Time Table and Evolution of Seed Habit. |
| **Co 3**  | Describe Fossils; Reconstruction of the following fossil plant :Lyginopteris, Williamsonia, Cycadeoidea. |
| **Co 4**  | Discribe in detail Morphology and Anatomy of root,stem leaf / leaflet and Reproductionn and life cycle and economic importance of following : Cycus,Pinus,Ephedra. |
| **Co 5**  | Discribe the General characters of Angiosperms including primitive angiosperms (Amentiferae,Ranales,Magnoliales) |

**Subject: Biological and Diversity of Seed Plant- 2 (Theory & Practical)**

|  |  |
| --- | --- |
| **Co1**  | Describe the taxonomy and systematic, fundamental component of taxonomy |
| **Co2**  | Role of chemotaxonomy, cytotaxnomy and taximatric in relation to taxonomy. Botanical Nomenclature, principles and rules, principle of priority. |
| **Co3**.  | Describe the key to identification of plants and flower and type of inflorescence |
| **Co4**  | Salient features of system of classification of angiosperms by Bentham and Hooker and Englar and Prantl. |
| **Co5**  | Discuss the Diversity of flowering plants: Diagnostic features and economic importance of the following families: Ranunculaceae, Brassicaceae, Malvaceae, Rutaceae, Lguminosae, Solanaceae etc. |

**CREDITS**- 3 **THEORY PERIODS OF EACH PAPER OF 45 MINUTES EACH PER WEEK OVER A SEMESTER**

 **6 PRACTICAL PERIODS OF 45 MINUTES EACH PER WEEK OVER A SEMESTER**

**B.Sc – Botany IInd year**

**Semester- IV**

**Subject**: **Plant anatomy (Theory & Practical)**

|  |  |
| --- | --- |
| **Co1**  | Describe diversity in plant forms annuals, biennials and perinnials. |
| **Co2**  | Tissue meristematic and permanent (simple and complex) |
| **Co3** | To discuss shoot system, shoot apical meristem and its histological organization in case of monocot and dicot stem, cambium structure and functions |
| **Co 4**  | Describe the secondary growth in dicot stem, characterstics of growth rings, anamolous secondary growth in *Dracaena, Boerhaavia* and *Achyranthes.* |
| **Co5** | Study in detail the type of leaves and phyllotaxy |
| **Co6** | Describe anatomy of typical monocot and dicot leaf and stomatal apparatus and their morphological types |
| **Co7** | Discuss the root system and histological organization (monocot and dicot root) and secondary growth in dicot root |
| **Co8**  | Describe the structural modification of roots- storage, respiratory and epiphytic |

.

**Subject Plant Embryology (Theory & Practical)**

|  |  |
| --- | --- |
| **Co1**  | Discuss in detail flower as a modified stem. |
| **Co2**. | Describe Sporogenesis and Gametogenesis |
| **Co3**. | Discuss in detail pollination,fertilization and post fertilization |
| **Co**4. | Formation of seed and fruit and dispersal of seed and fruit and vegetative reproduction |

**CREDITS**- 3 **THEORY PERIODS OF EACH PAPER OF 45 MINUTES EACH PER WEEK OVER A SEMESTER**

 **6 PRACTICAL PERIODS OF 45 MINUTES EACH PER WEEK OVER A SEMESTER**