Course Outcomes

Class: F. Y. B.Sc. Botany (Theory)

Semester I

Course (Paper) Name & No.: **Paper I: Plant Diversity I (USBO101)**

CO 1	To gain knowledge about structure, life cycle and systematic position of *Nostoc*, *Spirogyra* and understand economic importance of Algae.
CO 2	Understand the structure, life cycle and systematic position of *Rhizopus*, Aspergillus and learn the economic importance of Fungi.
CO 3	Learn about Modes of nutrition in Fungi.
CO 4	Understand the general characters of Hepaticae
CO 5	Getting knowledge about structure, life cycle and systematic position of *Riccia*.

Course (Paper) Name & No.: **Paper II: Form & Function I (USBO102)**

CO 1	Understand the structure of plant cell with the reference of cell wall and plasma membrane with the help of bilayer lipid structure and fluid mosaic model.
CO 2	Getting knowledge about structure and function of cell organelles like endoplasmic reticulum, chloroplast.
CO 3	Understand the aquatic and terrestrial ecosystem. Getting knowledge about Energy pyramids and how energy flows in an ecosystem.

CO 4	Learn about Phenotype/ Genotypes and Mendelian Genetics by understanding monohybrid, dihybrid, test cross along with back cross ratios.
CO 5	Getting knowledge about Epistatic and non epistatic interactions with multiple alleles.

Semester II

Course (Paper) Name & No.: **Paper I: Plant Diversity I (USBO201)**

CO 1	Understand the structure, life cycle, systematic position and alternation of generation in *Nephrolepis*.
CO 2	Getting knowledge about Stelar evolution.
CO 3	Understand the structure, life cycle, systematic position and alternation of generation in *Cycas* along with economic importance of gymnosperms.
CO 4	Getting all knowledge about Leaf, its types, Incisions, venation, phyllotaxy, leaf apex, margin, leaf base, shapes, types of stipules, modifications of leaf: spine, tendril, hooks, phyllode, pitcher, *Drosera* or insectivorous plants. Getting all knowledge about Inflorescence and its types.
CO 5	Getting all knowledge about Inflorescence and its types. Studying family Malvaceae, Amaryllidaceae.

Course (Paper) Name & No.: **Paper II: Form & Function I (USBO202)**

CO 1	Understand the types of tissues and primary structure of dicot and monocot root, stem and leaf.
CO 2	Understand the epidermal tissue system: types of hair, monocot and dicot stomata.
CO 3	Getting all knowledge about photosynthesis: light reactions, photolysis of water, Cyclic and non-cyclic photophosphorylation, carbon fixation phase i.e. C3, C4 and CAM pathways.
CO 4	Understand what Medicinal Botany is with the help of primary and secondary metabolites; know the difference between primary and secondary metabolites.
CO 5	Understand the concept of Grandma's pouch and study the following plants with respect to botanical source, part of the plant used, active constituents present and medicinal uses: *Oscimum sanctum*, *Adathoda vasica*, *Zinziber officinale*, *Curcuma longa*, *Santalum album*, *Aloe vera*.

Class: F. Y. B.Sc. Botany (Practical)

Semester I

(USBOP1) Practical based on Paper I: Plant Diversity I

CO 1	Study of stages in the life cycle of *Nostoc* and *Spirogyra* from fresh/ preserved material and permanent slides.
CO 2	Study of stages in the life cycle of *Rhizopus* and *Aspergillus* from fresh/ preserved material and permanent slides.
CO 3	Study of stages in the life cycle of *Riccia* from fresh/ preserved material

	and permanent slides.
CO 4	Understand about economic importance of Algae: *Ulva* (Biofuel), *Spirulina* (Neutraceutical), *Gelidium* (Agar). Fungi: Mushroom, Yeast, wood rotting fungi (any bracket fungus)
CO 5	Understand how the color changes due to change in pH: Anthocyanin, Taking tests for tannins and Learn to identify different plants or plant parts from grandma's pouch as per theory.

(USBOP1) Practical based on Paper II: Form and Functions I

CO 1	Examining various stages of mitosis in root tip cells (*Allium*), Understand Cell inclusions: Starch grains, Aleurone Layer, Cystolith, Raphides, Sphaeraphides.
CO 2	Identification of cell organelles with the help of photomicrograph: Plastids: Chloroplast, Amyloplast, Endoplasmic Reticulum and Nucleus.
CO 3	Identification of Plants adapted to different environmental conditions: Hydrophytes: Floating, Free floating, Rooted foating, Submerged. Mesophytes, Hygrophytes, Xerophytes, Woody xerophytes, Halophytes
CO 4	Calculation of mean, median, mode, standard deviation. Frequency distribution, graphical representation of data- frequency polygon, histogram, pie chart. And studying the karyotypes: Human: Normal male and female, *Allium cepa*.

Semester II

(USBOP2) Practical based on Paper I: Plant Diversity I

CO 1	Studying stages in the life cycle of *Nephrolepis* with mounting of ramentum, hydathode, T.S. of rachis, T.S. of pinna of *Nephrolepis* passing through sorus.
CO 2	Understand the Differrent types of steles and stelar evolution with the help of permanent slides.
CO 3	Getting all knowledge about *Cycas* by taking T.S. of leaflet (*Cycas* pinna), L.S. of ovule and by showing specimens of Megasporophyll, Microsporophyll, Coralloid root, Microspore of *Cycas*. Understand Economic importance of Gymnosperms (*Pinus*).
CO 4	Understand the leaf morphology, Types of inflorescence (as per theory) and study the families Malvaceae, Amaryllidaceae.

(USBOP2) Practical based on Paper II: Form and Functions I

CO 1	Gain knowledge about primary structure of dicot and monocot root as well as dicot and monocot stem.
CO 2	Understand the structure of dicot and monocot stomata.
CO 3	Studying Epidermal outgrowths like Unicellular, Multicellular outgrowths with the help of mountings and Epidermal outgrowths like Glandular, Stinging outgrowths as well as Peltate, stellate, T- shaped outgrowth with the help of permanent slides.
CO 4	Learn the technique of separation of chlorophyll pigments by strip

	paper chromatography and separation of amino acids by paper chromatography.

Class: S. Y. B.Sc. Botany (Theory)

Semester III

Course (Paper) Name & No.: **Paper I: Plant Diversity II (USBO301)**

CO 1	Getting knowledge about Thallophyta (Algae) & Bryophyta, Understand general characters of division phaeophyta: Distribution, cell structure, range of thallus, and economic importance. Understand structure, life cycle and systematic position of *Sargassum*.
CO 2	Getting all knowledge about class Anthocerotae and Musci by understanding structure, life cycle and systematic position of *Anthoceros*, *Funaria*.
CO 3	Understand Objectives and Goals of Plant systematic, Plant Nomenclature & Taxonomy in relation to Anatomy, Palynology, Chemical constituents, Embryology, Cytology and Ecology.
CO 4	Study vegetative, floral characters, economic importance of family Leguminosae, Asteraceae, Amaranthaceae, Palmae with the help of Bentham & Hooker's system of classification.
CO 5	Learn Modern Techniques of studying Plant Diversity like Dry & Wet preservation method, Principle & working of Light Microscopy, electron microscopy, Paper Chromatography, Thin layer chromatography, Horizontal & Vertical electrophoresis.

Course (Paper) Name & No.: **Paper II: Form & Function II (USBO302)**

CO 1	Understand Cell Biology by learning ultrastructure and function of cell organelles like Mitochondrion (membrane, cristae, F1 particles, matrix), Peroxisomes, Glyoxysomes, Ribosomes (prokaryotic, eukaryotic, subunits)
CO 2	Know all about Cell division and its significance, cell cycle, structure of interphase nucleus (nuclear envelop, chromatin network, nucleolus, nucleoplasm), Mitosis, Meiosis and types, structure, functions of Nucleic acid like DNA, RNA.
CO 3	Understand Cytogenetics by learning about variation in chromosome structure, chromosomal aberrations, sex determination, sex linked, sex influenced, sex limited traits and extranuclear genetics with organelle heredity
CO 4	Learn all about Molecular Biology by understanding DNA replication, DNA replication in prokaryotes and eukaryotes, Protein synthesis.
CO 5	Learn DNA replication (Modes of Replication, Messelson and stahl experiment), DNA replication in prokaryotes and eukaryotes (enzymes involved and molecular mechanism of replication), Protein synthesis (Central dogma of protein synthesis, Transcription in prokaryotes and eukaryotes: promoter sites, initiation, elongation, termination), RNA processing (Adenylation & Capping)

Course (Paper) Name & No.: **Paper III: Current Trends in Plant Sciences I (USBO303)**

CO 1	Know all about Pharmacognosy and Phytochemistry. Learn about Pharmacopoeia, Indian Pharmacopoeia, Indian Herbal Pharmacopoeia, Ayurvedic Pharmacopoeia, Monograph from Pharmacopoeia.
CO 2	Learn about Secondary Metabolites, its sources, properties, uses, adulterants, regional and seasonal variations. Adulterants like *Saraca asoca*&*Polyalthia longifolia*, *Terminalia arjuna* &*Terminalia tomentosa*, *Bacopa monnieri*&*Centella asiatica*, *Abrus* &*Glycyrrhiza*, *Phyllanthus amarus* (Bhuiamla)
CO 3	Learn all about forestry and economic botany, understand outline of types of forest in India, Agro-forestry, Urban forestry, Organic farming, silviculture. Learn types of fibers like jute, cotton. Know current trends in fiber industries. Learn about spices and condiments like Saffron and Cardamom. Know about commercial market of spices.
CO 4	Know all about Industry based on plant products like Introduction of Aromatherapy, uses of jojoba, lemon, jasmine oils. Botanical and nutraceuticals- *Spirulina*, *Vanillin*, *Garcinia indica*/ *Garcinia cambogia*, *Chlorella*, *Kale*.
CO 5	Learn about Enzyme Industry: Enzymes like Cellulases, papain, Bromelain and all about Biofuels.

Semester IV

Course (Paper) Name & No.: **Paper I: Plant Diversity II (USBO401)**

CO 1	Learn general characters of Ascomycetae. Structure, life cycle and systematic position of *Erysiphe*&*Xylaria*.

CO 2	Learn about plant pathology- Study symptoms, causative organism, disease cycle, control measures of Powdery mildew and Late blight of potato.
CO 3	Study lichens by understanding its classification, structure, Method of reproduction, Economic importance and ecological significance.
CO 4	Understand salient features and classification up to orders Psilophyta and Lepidophyta by following G. M. Smith's system of classification. Know about Structure, life cycle and systematic position of *Selaginella*.
CO 5	Understand Paleobotany by learning about geological time scale, formation and types of fossils, Structure and systematic position of form genus *Rhynia*.
CO 6	Know all about gymnosperms by understanding salient features, classification up to orders and economic importance of Coniferophyta by following chamberlain's system of classification.
CO 7	Learn about structure, life cycle and systematic position of *Pinus* as well as structure and systematic position of the form genus *Cordaites*.

Course (Paper) Name & No.: **Paper II: Form & Function II (USBO402)**

CO 1	Learn Anatomy by understanding normal secondary growth in Dicotyledonous stem, root, growth rings, periderm, lenticels, tyloses, heart wood, sap wood, mechanical tissue system and types of vascular bundles.
CO 2	Learn Plant Physiology and Plant Biotechemistry. Understand Aerbic respiration (Glycolysis, TCA Cycle, ETS, Energetic of respiration), Anaerobic respirtation, Photorespiration, Photoperiodism, mechanism

	and applications of vernalization.
CO 3	Understand Ecology and Environmental botany by learning about Biogeochemical cycles like carbon cycle, nitrogen cycle, water cycle, Ecological factors, concept of environmental factors like soil as an edaphic factor, soil composition, types of soil, soil formation, soil profile.
CO 4	Understand Community ecology by learning characters of community, quantitative characters and qualitative characters.

Course (Paper) Name & No.: **Paper III: Current Trends in Plant Sciences I (USBO403)**

CO 1	Learn all about Horticulture and Gardening: Introduction, Branches of Horticulture and Gardening: different locations in garden with names of plants for each category, focal point. Types of garden like Formal & Informal gardens, National Parks like Sanjay Gandhi National Park, Veer Mata Jijabai Udyan (Victoria garden), Botanical garden.
CO 2	Understand Biotechnology. Know about plant tissue culture, introduction, laboratory organization and techniques in plant tissue culture, Totipotency, Organogenesis, Organ culture like root culture, meristem culture, anther and pollen culture, embryo culture.
CO 3	Understand R-DNA technology- Gene cloning, Enzymes involved in Gene cloning, vectors used for gene cloning.
CO 4	Get all information about Biostatistics and Bioinformatics: Understand Biostatistics, learn chi square test, correlation- calculation of coefficient of correlation.

CO 5	Learn about Bioinformatics, introduction, goal, need, scope, limitation. Information technology, its history, tools, internet and its uses. Aims of Bioinformatics, data organization, tools of bioinformatics, tools for web search, data retrieval tools- Entrez, BLAST, Bioinformatics programme in India.

Class: S. Y. B.Sc. Botany (Practical)

Semester III

(USBOP3) Practical based on Paper I: Plant Diversity II

CO 1	Study of stages in the life cycle of *Sargassum* from fresh/ preserved material & permanent slides. Understand Economic importance and range of thallus in Phaeophyta.
CO 2	Study of stages in the life cycle of *Anthoceros* and *Funaria* form fresh/ preserved material & permanent slides.
CO 3	Study of plants for anatomy in relation to taxonomy and chemotaxonomy like Phenols, Flavanoids.
CO 4	Study of one plant form each family prescribed for theory: morphological peculiarities and economic importance of the members of these families.
CO 5	Learn techniques to study plant diversity, Preparation of herbarium and wet preservation technique. Understand chromatography, Learn to separate the amino acids by circular paper chromatography, separate the Carotenoids by TLC, Demonstration of Horizontal and vertical gel electrophoresis.

(USBOP3) Practical based on Paper II: Form and Functions II

CO 1	Understand Cell Biology. Study ultra-structure of cell organelles prescribed for theory from Photomicrographs. Estimation of DNA and RNA from plant material.
CO 2	Know about Cytogenetic. Study of inheritance pattern with reference to Plastid Inheritance. Study of cytological consequences of chromosomal aberrations (Laggards, Chromosomal Bridge, Ring chromosome, Chromosomal ring) from permanent slides or photomicrographs. Study of mitosis and meiosis from suitable plant material.
CO 3	Learn all about Molecular Biology, Learn DNA sequencing – Sanger's method.
CO 4	Determining the sequence of amino acids in the protein molecules synthesized from the given m-RNA strand (prokaryotic and eukaryotic)

(USBOP3) Practical based on Paper III: Current Trends in Plant Sciences I

CO 1	Study of *Phyllanthus amarus*, *Saraca asoka*, *Bacopa monieri*.
CO 2	Study of Biodiversity by visiting the national park/ botanical garden. Learn about sources of Fibres & paper, Spices & condiments. Preparation of herbal cosmetics (Face pack/ De-tanning cream)
CO 3	Estimation of crude fibres in cereals & their products.
CO 4	Preparation & evaluation of probiotic foods.
CO 5	Evaluation of nutraceuticals value of mushroom/ wheat germ.

Semester IV

(USBOP4) Practical based on Paper I: Plant Diversity II

CO 1	Learn all about Fungi and plant pathology, Study the stages in the life cycle of *Erysiphe*, *Xylaria* from fresh/ preserved material and permanent slides. Study fungal diseases as prescribed in theory.
CO 2	Study all about Lichens, types of Lichens (Crustose, foliose and fruiticose)
CO 3	Learn more about Pteridophyta and Palaeobotany. Study of stages in the life cycle of *Selaginella* from fresh/ preserved material and permanent slides. Study of form genera *Rhynia* with the help of permanent slides/ photomicrographs.
CO 4	Understand Gymnosperms by studying of stages in the life cycle of *Pinus* from fresh/ preserved material and permanent slides.
CO 5	Study of the form genus *Cordaites* with the help of permanent slide/ photomicrographs.

(USBOP4) Practical based on Paper II: Form and Functions II

CO 1	Learn anatomy, Study of normal secondary growth in the stem and root of a Dicotyledonous plant. Types of mechanical tissues, mechanical tissue system in aerial, underground organs.
CO 2	Study of conducting tissues- Xylem and Phloem elements in Gymnosperms and Angiosperms as seen in L.S. and through maceration techniques. Different types of vascular bundles, Growth rings, periderm, lenticels, tyloses, heart wood and sap wood.

CO 3	Understand Plant Physiology and Plant Biochemistry- Q10-germinating seeds using phenol red indicator, NR activity- *in-vivo*, Estimation of proteins by Lowry's method.
CO 4	Learn about Ecology and Environmental Botany, Study of the working of Ecological instruments like Soil thermometer, Soil testing kit, Soil pH, Wind anemometer. Learn to do mechanical analysis of soil by the sieve method and pH of Soil, Quantitative estimation of organic matter of the soil by Walkley and Blacks Rapid titration method.
CO 5	Study of vegetation by the list quadrant method.

(USBOP4) Practical based on Paper III: Current Trends in Plant Sciences I

CO 1	Learn all about Horticulture, Study about plants for each garden location as prescribed for theory. Preparation of garden plans for formal and informal gardens. Preparation of Bottle and dish gardens.
CO 2	Understand Biotechnology by learning various sterilization techniques, Preparation of Stock solutions and MS medium.
CO 3	Learn about seed sterilization, callus induction, Regeneration of plantlet from callus. Identification of the cloning vectors- pBR322, pUC 18, Ti plasmid.
CO 4	Understand all about Biostatistics and Bioinformatics, Learn Chi square test, Calculation of coefficient of correlation.
CO 5	Learn about Web Search – Google, Entrez. Learn about BLAST

Class: T. Y. B.Sc. Botany (Theory)

Semester V

Course (Paper) Name & No.: **Paper I: Plant Diversity III (USBO501)**

CO 1	To gain knowledge about microbial diversity and techniques for culturing and visualization.
CO 2	To understand the salient features of three major groups of algae, their life cycle patterns with a suitable example; to be able to identify them.
CO 3	To learn the general characteristics and classification of two major groups of fungi along with life cycles of each group; to be able to identify them.
CO 4	To understand the scope and importance of plant pathology and apply the concepts of various control measures of commonly widespread plant diseases.

Course (Paper) Name & No.: **Paper II: Plant Diversity IV (USBO502)**

CO 1	To acquire knowledge of different fossil forms and understand their role in evolution.
CO 2	To provide plant description, describe the morphological and reproductive structures of seven families and also identify and classify according to Bentham and Hooker's system.
CO 3	To gain proficiency in the use of keys and identification manuals for identifying any unknown plants to species level.

CO 4	To relate anomalies in internal stem structure with function and appreciate the salient features of the root stem transition zone.
CO 5	To get exposure to pollen study and learn to apply it in various fields.

Course (Paper) Name & No.: **Paper III: Form & Function III (USBO503)**

CO 1	To acquire knowledge about two important organelles and molecular mechanisms of translation.
CO 2	To understand water relations of plants, inorganic and organic solute transport and apply the knowledge to manage mineral nutrition and survival in challenging abiotic stresses.
CO 3	To understand succession in plant communities and study remediation technologies in order to apply knowledge acquired for cleanup of polluted sites.
CO 4	To get exposure to principles and techniques of plant tissue culture and apply these studies for improving agriculture and horticulture and to become an entrepreneur.

Course (Paper) Name & No.: **Paper IV: Current Trends in Plant Sciences II (USBO504)**

CO 1	To get exposure to the technique of mushroom cultivation and explore the possibility of entrepreneurship in the same.
CO 2	To learn ethno-botanical principles, applications and utilize indigenous plant knowledge for the cure of common human diseases and improvement of agriculture.

CO 3	To gain knowledge about the latest molecular biology techniques for isolation and characterization of genes.
CO 4	To learn principles and application of commonly used techniques in instrumentation.
CO 5	To gain proficiency in the monograph study and pharmacognostic analysis of six medicinal plants.

Course (Paper) Name & No.: **Paper V: Horticulture & Gardening I (USACHO501)**

CO 1	Explore the importance of horticulture and research institutes in India.
CO 2	Practicing the use of special garden implements.
CO 3	To gain knowledge of propagation methods of horticultural crops.
CO 4	Utilize the green manures and organic fertilizers.

Semester VI

Course (Paper) Name & No.: **Paper I: Plant Diversity III (USBO601)**

CO 1	To identify, describe and study in detail the life cycles of three Bryophytes.
CO 2	To and study in detail classification and general characters of three classes of Pteridophytes and identify as well as describe the life cycles of one example from each class.
CO 3	To study evolutionary aspects and economic utilization of Bryophytes and Pteridophytes.

CO 4	To identify, describe and study in detail the life cycles of three Gymnosperms.

Course (Paper) Name & No.: **Paper II: Plant Diversity IV (USBO602)**

CO 1	To study contribution of Botanical gardens, BSI to Angiosperm study and provide plant description, describe the morphological and reproductive structures of seven families.
CO 2	To gain exposure to a phylogenetic system of classification.
CO 3	To gain insight into the anatomical adaptations of different ecological plant groups.
CO 4	To understand development plant of male and female gametophytes, embryonic structure and development.
CO 5	To understand the different aspects and importance of Biodiversity and utilize them for conservation of species so as to prevent further loss or extinction of Biodiversity and preserve the existing for future generations.

Course (Paper) Name & No.: **Paper III: Form & Function III (USBO603)**

CO 1	To study various plant biomolecular structures and appreciate the structures, role, functions and applications of enzymes.
CO 2	To gain insight into the Nitrogen and plant hormone metabolism with applications of the same in agriculture and horticulture.
CO 3	To understand principles of genetic mapping, mutations and solve problems based on them, gain knowledge of various metabolic

	disorders and their implications.
CO 4	To generate and test hypotheses, make observations, collect data, analyze and interpret results, derive conclusions and evaluate their significance within a broad scientific context, using suitable statistical techniques.

Course (Paper) Name & No.: **Paper IV: Current Trends in Plant Sciences II (USBO604)**

CO 1	To gain insight into recent molecular biology techniques for DNA analysis and amplification and Barcoding techniques and applications there in.
CO 2	To understand and apply tools of Bioinformatics for data retrieval and phylogenetic analysis.
CO 3	To learn about the sources of economically important plants in the field of fats and oils and apply it for extraction, dealing with entrepreneurship in the field.
CO 4	To gain knowledge and proficiency in preservation of post-harvest produce and explore the possibility of entrepreneurship in the field.

Course (Paper) Name & No.: **Paper V: Horticulture & Gardening II (USACHO601)**

CO 1	Able to demonstrate laying out various types of gardens.
CO 2	To demonstrate employability skills in the field of horticulture.
CO 3	To develop skill in harvesting and packaging techniques for long term

	storage.
CO 4	To gain knowledge on physiology, principles, factors influencing, media and methods of propagation of Horticultural crops.

Class: T. Y. B.Sc. Botany (Practical)

Semester V

Course Code: **USBOP5**: **Practical based on two courses in theory (501 & 502)**

CO 1	Acquire knowledge of aero micro biota by using different culture media.
CO 2	Ability to identify and classify various stages of Cryptogams and Angiosperms.
CO 3	Gain knowledge about Bentham and Hooker's system of classification.
CO 4	Skills in identification of Plants diseases and control measures.

Course Code: **USBOP6**: **Practical based on two courses in theory (503 & 504)**

CO 1	Acquire skill of estimation of iron and phosphorus from plant tissue.
CO 2	Learn techniques, methods of water analysis.
CO 3	Acquire skills in various methods of mushroom cultivation.
CO 4	Understanding the concept of Beer Lambert's Law.

Course Code: **USACHO5P1**: **Practical of Paper V: Horticulture & Gardening I**

CO 1	Acquire skills in artificial and natural propagation methods of horticultural plants.
CO 2	Understand the importance of plant nutrients and organic farming.
CO 3	Acquire skills in the field of horticulture.
CO 4	Gain knowledge about identification of plant diseases, pests and their management.

Semester VI

Course Code: **USBOP8**: **Practical based on two courses in theory (601 & 602)**

CO 1	Gain knowledge about identification and classification of Bryophytes, Pteridophytes and Gymnosperms.
CO 2	Understand the various stages of Microsporogenesis, Megasporogenesis and embryo development.
CO 3	Acquire the knowledge of economic importance of Bryophytes and Gymnosperms.
CO 4	Ability to differentiate types of Sori and Soral arrangement in Pteridophytes.

Course Code: **USBOP9**: **Practical based on two courses in theory (603 & 604)**

CO 1	Skills in use of mathematical tools of biostatistics and bioinformatics.
CO 2	Learn the various qualitative tests of identification of biomolecules.
CO 3	Understand the methods of DNA sequencing.
CO 4	Learn methods of preparation of Squash, Jam, Jelly, Pickle and their

	Packaging.

Course Code: **USACHO6P1**: **Practical of Paper V: Horticulture & Gardening II**

CO 1	Skills in designing of a garden plan with suitable features.
CO 2	Able to understand the concept of Greenhouse technology.
CO 3	Acquire skills in floriculture and their management.
CO 4	Learn skills in fruits and vegetables carving and bio-jewellery.