Department of Botany

Programme outcomes and Programme specific outcomes of B.Sc. Botany students	
Programme outcomes Sem I: BO111, BO112, BO113 SemII BO121, BO122,BO123 Sem III BO231, BO232, BO233 Sem IV BO241, BO242, BO243	After completion of three years graduation course in botany there are number of outcomes as stated below-
	PO1: students know about basics in botany like lower organism, higher organism, their evolution, their morphology, anatomy, classification etc.
	PO: 2 Students know about molecular basis of life, structure of DNA, RNA, their binding, various life processes, and metabolic processes in plants in plants.
	PO3: Students know about embryology, science of classification, preparation of herbarium, various instruments and tools useful to study plants, their abnormalities in growth, various families and their specific characters.
	PO4: students get aware about various technologies and life phenomenon useful in biotechnology, greenhouse technology etc.
	BO232:PO5: students get aware about environment and plants various adaptations according to surrounding environment.
	PO6: students get knowledge about cell division its types and its stages, reproduction, hoe the genetic variation appears in organism..
	PO7: students get basic knowledge about plants life science which will help them in preparations of various competitive examination.
Programme specific outcomes	PSO1: when students at special level of botany subject they study about life cycles of various and numbers of lower plants like algae, fungi, bryophytes, pteridophytes, gymnosperms angiosperms etc.
	PSO2: students get knowledge about evolution of species their ancestors, different theories regarding evolution, knowledge about fossils, resemblance and differences of today's plant families with their ancestors by their fossil records.
	PSO3: students know about statistical analysis which is useful in research technologies. Such as standard deviation, standard error coefficient regression, probabilities student t test etc.
	PSO4: students know about cell, cell organelles, molecular basis of life, nature of genes, DNA, RNA, genetic expression, genetic variability, genetic engineering, DNA fingerprinting.
	PSO5:students know about genetic interactions, allelic expressions, epistasis, responsible causes of different blood groups, causes of different genetical disorders, sickle cell anemia different syndromes, sexual inheritance and related disorders colourblindness, causes of baldness its pattern, lethal genes, linkages, maternal inheritance, different characters in organism, structural changes and changes in chromosomes i.e. mutation its causes etc.

	PSO6: students study about seed technologies, methods of production of hybrid seeds, plant breeding its various techniques, various cultivation methods of artificial cultivation.
	PSO7: Students know about horticulture, tissue culture, cultivation practices of various economically important crops, their processing marketing methods of preservation.
	PSO8: students study about pharmacognocy, drug science, various plant originated drugs their properties, their medicinal uses, methods of preparations of drugs, their cultivation practices.
	PSO9: students know about plant pathology, epidemics, various viral, bacterial, fungal, nematodal, mycoplasma diseases, different plant host of these pathogens symptoms control measures, satellite and remote sensing etc.
	PSO10: students know about physiological processes like photosynthesis, respiration, stress, biochemistry, biomolecules their structure, properties etc.
	PSO11: After this huge knowledge about plant science through theory and practical students can use this knowledge for self-employments like establishment of own nursery, green house and cultivation of export quality crops, establishment of fruit orchard, floriculture also a valuable business there is great demands of various flowers for different occasions, they should have their own tissue culture laboratory, own food processing unit, they can grow medicinal plants and supplied to the pharmaceutical industries, they may be mushroom producers.
	PSO12: If they are not interested in self-employment they can do job in various industries as an expert in seed industry, green house supervisor, tissue culture operator, supervisor, nursery supervisor, food processing unit supervisor/processor. Or may introduce for higher education, research.

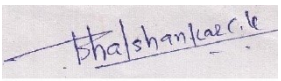
Course outcomes of T.Y.B.Sc.Botany

Name of the course	**Sem III**
BO.331 CRYPTOAMIC BOTANY	CO.1: Students know about the life cycles of lower cryptograms
	CO.2: Students study about their diversities, their systematics, morphology and internal structures, reproduction, their types
	CO.3: Students know about economic importance and their evolution.
BO.332 CELL AND MOLECULAR BIOLOGY	CO.1: Students know about cell, cell organelles, its functions
	CO.2: Students know about molecular basis of genes, DNAs, RNAs
	CO.3: They know about expression of genes, transcription and translation of proteins in prokaryotes and eukaryotes.
BO.333 GENETICS AND EVOLUTION	CO.1: Students know about the Mendelian genetics, neo-mendelism, and interactions of genes, sexual inheritance, and cytoplasmic inheritance.
	CO.2: students know about linkages, multiple allelism, quantitative inheritance, chromosomal mutation-structural, number , population genetics etc.
	CO.3: students know about evolution, different theories of evolution, evolution evidences through various sources.

BO.334 SPEMATOPHYTE AND PALEOBOTANY	CO.1: Students know about the systematic study of gymnosperms and angiosperms, their diversity, morphology, reproduction, life cycles
	CO.2: Students know about paleobotany, fossils, their relevance, types
	CO.3: Students know about the economic importance of gymnosperms and angiosperms, scope and application of paleabotany
BO.335 HORTICULTURE AND FLORICULTURE	CO.1: Students know about methods of plant propagation, cultivation practices of economically important fruits and vegetables
	CO.2: Students know about methods of preservation, processing and marketing
	CO.3: Students know about the important floricultural crops , their cultural practices, processing, marketing, economic importance
BO.336 COMPUTATIONAL BOTANY	CO.1: Students know about statistical methods like measuring central tendency mean, mode, median, mean deviation, standard deviation, coefficient regression, etc.
	CO.2:Students know about probability, sampling of data, student 't' test, χ^2 test, etc.
	CO.3: Students can apply statistics to biological data
COURSE	**SEM IV**
BO.341 PLANT PHYSIOLOGY AND BIOCHEMISTRY	CO.1: Students know about various metabolic processes like photosynthesis, respiration, β-oxidation of fat, stress, different types, translocation of solutes etc.
	CO.2: students know about various biomolecules –carbohydrates, proteins, lipids, their properties.
	CO.3: students know about biocatalyst enzymes, their nature, properties, their activities, etc.
BO.342 PLANT ECOLOGY AND BIODIVERSITY	CO.1:Students know about biotic and abiotic factors of the ecosystem, various food chains existed in ecosystem
	CO.2: Students know about diversity and adaptations in various groups of plants, they understand plant communities and their relations
	CO.3: Students know about scope, importance and management of biodiversity.
BO.343 PLANT PATHOLOGY	CO.1: Students know about disease cycle and disease development, various pathogens like virus, bacteria, fungi, nematodes etc.
	CO.2: students know the host of diseases, symptoms, and control measures.
	CO.3: students know disease forecasting, plant epidemic, remote sensing, etc.
BO.344 MEDICAL AND ECONOMICAL BOTANY	CO.1: Students know about the various medicinal plants, their medicinal properties, uses, cultivation practices, various methods of drug preparation.
	CO.2: Students know about scope and importance of pharmacognocy, they understand the concept of Ayurvedic pharmacy.
	CO.3: Students know about scope and importance of economic botany, they know about different botanical resources like different forest products.
BO.345 PLANT BIOTECHNOLOGY	CO.1: Students know about the fundamentals of recombinant DNA technology, tissue culture technology, and fermentation technology.

	CO.2: Students know about the role of microbes in agriculture, medicine and various industries.
	CO.3: They understand the concept of bioinformatics, genomics and proteomics, they understand technical germplasm and cryopreservation
BO.346 PLANT BREEDING AND SEED TECHNOLOGY	CO.1: Students know about scope and importance of plant breeding, techniques of production of new hybrid varieties, different plant breeding techniques
	CO.2: they know about the heterosis, hybrid vigors, etc.
	CO.3: Students know the processes of seed germination, processing, production, etc.

Note: Please check the grammatical mistakes



HoD,

Department of Botany,

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