Academic Year 2019-20

B.P.H.E. Society's
Ahmednagar College, Ahmednagar
Internal Quality Assurance Cell
CO, PO, and PSO Attainment Sheet

Department Name	**Botany**

Program Name	**B.Sc.(UG)**

Program Outcomes(PO)

PO1	Knowledge and understanding of the range of plant diversity in terms of structure, function and environmental relationships. The roleof plants in the functioning of the ecosystem. A selection of more specialized, optional topics. Statistics as applied to biological data.
PO2	Intellectual skills – able to think logically and organize tasks into a structured form. Assimilate knowledge and ideas based on wide reading and through the internet.
PO3	Scientific Knowledge: Apply the knowledge of basic science, life sciences and fundamental process of plants to study and analyze any plant form.
PO4	Problem analysis: Identify the taxonomic position of plants, formulate the research literature, and analyze non reported plants with substantiated conclusions using first principles and methods of nomenclature and classification in Botany.
PO5	Problem analysis: Identify the taxonomic position of plants, formulate the research literature, and analyze non reported plants with substantiated conclusions using first principles and methods of nomenclature and classification in Botany.
PO6	Design/development of solutions: Design solutions from medicinal plants for health problems, disorders and disease of human beings and estimate the phytochemical content of plants which meet the specified needs to appropriate consideration for the public health
PO7	Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern instruments and equipments for Biochemical estimation, Molecular Biology, Biotechnology, Plant Tissue culture experiments, cellular and physiological activities of plants with an understanding of the application and limitations.
PO8	Environment and sustainability: Understand the impact of the plant diversity in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO9	Ethics: Apply ethical principles and commit to environmental ethics and responsibilities and norms of the biodiversity conservation.
PO10	
PO11	
PO12	

Program Specific Outcome(PSO)

PSO1	Students should know the concept of taxonomy and systematics, Students should know the concept of ecological grouping of plants
PSO2	Classification systems, Bionomial Nomenclature and taxonomic tools
PSO3	Study of plant families from Polypetalae, Gamopetalae ,Achlamydae and monocots , Students should get the knowlwdge of Computers i

Academic Year :	**2019-20**

Class		FYBSc
Subject Code		11141
Subject Name		Plant Life and Utilization - I
Semester No		I
Teacher Name		Dr. Nisha Godse
Course Outcomes		
	CO1	Students will understand the general classfication of plants
	CO2	Ability to understand plant species diversity in world and India
	CO3	Students will able to understand the life cycle of Plant Kingdom.
	CO4	Ability to understand the core concepts in Plant Kingdom
	CO5	To understand the utilization of plants in every aspects

Course Outcomes	Program Outcomes									PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3
CO1	2	3	2	3	2	2	2	2	2	2	2	1
CO2	3	1	2	3	2	2	2	2	2	2	2	2
CO3	2	3	3	2	1	2	2	2	2	2	2	2
CO4	2	2	3	2	2	1	2	2	2	2	2	2
CO5	3	3	3	2	2	2	2	2	2	2	2	2
Average	2.40	2.40	2.60	2.40	1.80	1.80	2.00	2.00	2.00	2.00	2.00	1.80

Class		FYBSc
Subject Code		11142
Subject Name		Plant Morphology & Anatomy
Semester No		I
Teacher Name		Sudhir Bale
Course Outcomes		
	CO1	Ability to understand Basic plant morphology
	CO2	Able to understand basic types of inflorescence
	CO3	Ability to understand structure and deviations in the flower and fruits
	CO4	Ability to understand internal organization of plant body
	CO5	Ability to understand types of tissues and their functions

Course Outcomes	Program Outcomes									PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3
CO1	2	3	2	2	3	3	1	2	2	2	2	2
CO2	3	3	3	2	1	1	3	2	3	2	3	3
CO3	2	1	1	3	3	2	2	3	3	2	2	3
CO4	2	2	3	3	2	3	3	2	2	2	2	2
CO5	3	3	2	2	1	3	2	2	2	2	2	2
Average	2.40	2.40	2.20	2.40	2.00	2.40	2.20	2.20	2.40	2.00	2.20	2.40

Class	FYBSc
Subject Code	11143
Subject Name	**Botany Practical- Semester**
Semester No	I
Teacher Name	Dr. Nisha H. Godse
Course Outcomes	
CO1	Students will gain the Practical Knowledge of Alage,Fungi, Bryophytes, Pteriodophytes
CO2	Students will learn the Morhology and anatomy of stem, leaves and root
CO3	Ability to understand the inflorescence study
CO4	Ability to understand the study of Fruits
CO5	Ability to undesrtand the difference between Monocot and Dicot plants.

Course Outcomes	Program Outcomes									PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3
CO1	2	2	2	2	2	2	2	2	2	2	2	2
CO2	2	2	2	2	2	2	2	2	2	2	2	2
CO3	2	2	2	2	2	2	2	2	2	2	2	2
CO4	2	2	2	2	2	2	2	2	2	2	2	2
CO5	2	2	2	2	2	2	2	2	1	2	2	2
Average	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.80	2.00	2.00	2.00

Class	FYBSc
Subject Code	12141
Subject Name	Plant Life and Utilization - II
Semester No	II
Teacher Name	Dr. Nisha Godse
Course Outcomes	
CO1	Students will understand the basic concept of Plant diversity
CO2	Ability to understand the concepts of Thallophytes
CO3	Students will able to differentiate between Lower and Higher Cryptogams
CO4	Students will learn the economic importance of Plant Kingdom
CO5	Ability to differntiate between spermatophytes and Cryptogams

Course Outcomes	Program Outcomes									PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3
CO1	2	2	3	2	2	3	2	2	2	2	2	3
CO2	2	2	2	2	2	2	2	2	2	2	2	2
CO3	3	3	2	2	2	2	2	2	2	2	2	2
CO4	3	3	2	2	2	2	2	3	3	2	2	2
CO5	2	2	2	2	2	2	2	2	2	2	2	2
Average	2.40	2.40	2.20	2.00	2.00	2.20	2.00	2.20	2.20	2.00	2.00	2.20

Class	FYBSc
Subject Code	12142
Subject Name	Principles of Plant Science
Semester No	II
Teacher Name	Sudhir Bale

Course Outcomes	Program Outcomes									PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3
CO1	2	3	2	2	3	2	1	3	2	2	2	3
CO2	3	3	2	2	2	1	3	2	3	3	2	2
CO3	3	2	1	3	3	2	2	3	2	2	3	3

Course Outcomes		
	CO1	Ability to understand basic plant physiological processes like osmosis, diffusion etc.
	CO2	Ability to understand phenomenon of plant growth and growth hormones
	CO3	Ability to understand Plant cell structure and cell division
	CO4	Ability to understand basics of molecular biology and central dogma of MB
	CO5	Ability to understand DNA, RNA structure, DNA replication, chromosome organization

CO4	2	2	3	2	2	3	2	2	2	2	2	3
CO5	3	3	2	2	1	3	2	2	3	3	2	2
Average	2.60	2.60	2.00	2.20	2.20	2.20	2.00	2.40	2.40	2.40	2.20	2.60

Class	FYBSc
Subject Code	12143
Subject Name	BO 123: Practical based on BO 121 & BO 122
Semester No	II
Teacher Name	Sudhir Bale

Course Outcomes		
	CO1	Able to Understands life cycle of *Nephrolepis* and *Cycas*
	CO2	Able to Understands Bentham and Hooker classification with example, Comparative account of dicot and monocot with example.
	CO3	Able to Understands and observe the features of Prokaryotic cell and Eukaryotic Cell.
	CO4	Hands on training on study mitosis and meiosis
	CO5	Hands on experiance and realtime observation of Plasmolysis., DPD, etc.
	CO5	

Course Outcomes	Program Outcomes									PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3
CO1	3	2	2	3	2	1	3	2	2	3	2	2
CO2	3	2	2	2	1	3	2	3	3	3	2	3
CO3	2	1	3	3	2	2	3	2	3	3	3	2
CO4	2	3	2	2	3	2	2	2	2	3	3	3
CO5	3	2	2	1	3	2	2	3	3	2	3	3
Average	2.60	2.00	2.20	2.20	2.20	2.00	2.40	2.40	2.60	2.80	2.60	2.60

Academic Year :	**2019-20**

Class		SYBSc
Subject Code		81411
Subject Name		Angiosperm Taxonomy & Plant Community
Semester No		III
Teacher Name		Prof. Abhijit Kulkarni
Course Outcomes		
	CO1	Students should know the concept of taxonomy and systematics
	CO2	Classification systems, Bionomial Nomenclature and taxonomic tools
	CO3	Study of plant families from Polypetalae, Gamopetalae ,Achlamydae and monocots
	CO4	Students should get the knowlwdge of Computers in taxonomy
	CO5	Students should know the concept of ecological grouping of plants

Course Outcomes	Program Outcomes									PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3
CO1	3	3	3	3	3	2	2	2	2	3	3	3
CO2	3	3	3	3	3	2	2	3	2	2	2	2
CO3	3	3	3	3	3	3	1	1	1	2	2	2
CO4	3	3	3	3	3	3	3	3	2	3	3	3
CO5	3	3	3	3	3	2	2	3	1	3	3	3
Average	3.00	3.00	3.00	3.00	3.00	2.40	2.00	2.40	1.60	2.60	2.60	2.60

Class		SYBSc
Subject Code		81421
Subject Name		Plant Physiology
Semester No		III
Teacher Name		Mr. Sagar Bawake
Course Outcomes		
	CO1	Students will comprehend how vascular plants obtain water from the environment, concept of transpiration for absorption of water.
	CO2	Students will comprehend how plants acquire mineral nutrients from the soil, various plant growth regulators and plant growth mapping using arc auxonometer, etc.
	CO3	Students will understands that how plants acquire nitrogen through their symbiosis with soil bacteria.

Course Outcomes	Program Outcomes									PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3
CO1	3	2	3	3	2	1	3	3	2	3	3	3
CO2	2	2	2	2	3	2	3	3	1	3	3	3
CO3	3	3	3	3	3	2	2	3	2	2	2	3
CO4	3	2	2	2	3	3	3	2	3	2	3	3
CO5	2	3	3	3	3	3	3	3	2	2	2	3
Average	2.60	2.40	2.60	2.60	2.80	2.20	2.80	2.80	2.00	2.40	2.60	3.00

	CO4	will understands that, seed dormancy, its impact on seed germination and overall production from crop plants.
	CO5	Students will comprehend how plants are flowers by using various phytoharmones and concept of vernalization.

Class	SYBSc	
Subject Code	81412	
Subject Name	Plant Anatomy and Embryology	
Semester No	IV	
Teacher Name	Prof. Abhijit Kulkarni	
Course Outcomes		
	CO1	Students will learn the scope of anatomy and various tissue systems in plant body
	CO2	Students will aquire knowledge about role of each tissue system in plant body
	CO3	Students will aquire knowledge about why plants grow to become big sized tree
	CO4	students will gain knowledge about development of male and female reproductive parts , production of gametes, fertilization and embryogenesis
	CO5	Students will learn about significance of double fertilization and triple fusion and various tyoes of endosperms

Course Outcomes	Program Outcomes									PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3
CO1	3	3	3	3	2	2	3	2	2	3	3	3
CO2	3	3	3	3	3	3	2	2	2	2	2	2
CO3	3	3	2	3	3	2	2	2	1	2	2	2
CO4	3	3	3	3	3	3	3	1	3	3	3	3
CO5	3	3	3	3	3	2	3	3	2	3	3	3
Average	3.00	3.00	2.80	3.00	2.80	2.40	2.60	2.00	2.00	2.60	2.60	2.60

Class	SYBSc	
Subject Code	81422	
Subject Name	Plant Biotechnolgy	
Semester No	IV	
Teacher Name	Mr Sagar Bawake	
Course Outcomes		
	CO1	will provide an overview of the key enzymes like amylase, protease, lipase currently used in large scale industrial processes for food or other purposes as well as students will comprehend what is single cell protein and their application in day today life and there need to mankind
	CO2	understanding fermentation technolgy for production of various beverages, fermented food, how to do fermentation process etc.

Course Outcomes	Program Outcomes									PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3
CO1	3	2	3	2	0	2	3	3	1	0	2	1
CO2	2	3	2	3	3	2	3	3	2	1	1	3
CO3	3	2	3	2	2	2	3	3	3	3	3	2
CO4	2	1	3	1	3	2	3	3	3	3	3	3
CO5	2	3	3	2	2	2	3	3	2	2	2	2
Average	2.40	2.20	2.80	2.00	2.00	2.00	3.00	3.00	2.20	1.80	2.20	2.20

	CO3	learning about plant genetic engineering, there methods and application for plants better life free from diseses.
	CO4	will provide knowledge about the environmental pollution, how to remediate that pollution from environment by using various plants.
	CO5	students will well comprehense the nanotechnolgy and there application in agriculture.

Class	SYBSc	
Subject Code	81432	
Subject Name	Practicals based on Theory courses (Paper I and II)	
Semester No	Annual	
Teacher Name	Prof. Abhijit Kulkarni	
Course Outcomes		
	CO1	Students have gained knowledge about various taxonomy terms and the tools used in taxonomy
	CO2	students have studied various plants belonging to various families
	CO3	Developed Ability to understands and interpretation of tetra sporangiate anther, various types of ovules and Study of dicot and monocot embryo.
	CO4	Hands on training of instruments and learning process of plants tissue culture.
	CO5	Hands on traing on Preparation & sterilization of MS medium, Surface sterilization and Inoculation of nodal sector, leaf, anther and maize embryo

Course Outcomes	Program Outcomes									PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3
CO1	3	2	3	2	0	2	3	3	1	0	2	1
CO2	2	3	2	3	3	2	3	3	2	1	1	3
CO3	3	2	3	2	2	2	3	3	3	3	3	2
CO4	2	1	3	1	3	2	3	3	3	3	3	3
CO5	2	1	3	1	3	2	3	3	3	3	3	3
Average	2.40	1.80	2.80	1.80	2.20	2.00	3.00	3.00	2.40	2.00	2.40	2.40

Academic Year :	**2019-20**

Class		TYBSc
Subject Code		91413
Subject Name		Cryptogamic Botany (Algae and Fungi)
Semester No		III
Teacher Name		Dr. Nisha H. Godse
Course Outcomes		
	CO1	comprehension of introduction of cryptogams and its types
	CO2	Able to understand the core concept of thallophyta with examples
	CO3	Able to understand the basic concepts, characteristics,life cycle of Algae
	CO4	Able to understand the general concepts and thallus organization of fungi
	CO5	Able to understand the difference between Lower and Higher Cryptogmaic Plants

Course Outcomes	Program Outcomes									PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3
CO1	2	1	2	2	2	3	1	2	3	2	3	1
CO2	2	2	1	2	3	2	2	2	2	1	2	1
CO3	2	3	3	3	3	1	3	2	1	3	2	3
CO4	3	3	3	3	3	2	3	2	1	3	3	3
CO5	3	2	2	3	3	3	3	2	2	2	2	2
Average	2.40	2.20	2.20	2.60	2.80	2.20	2.40	2.00	1.80	2.20	2.40	2.00

Class		TYBSc
Subject Code		91423
Subject Name		Cell and Molecular biology
Semester No		III
Teacher Name		Sudhir Bale
Course Outcomes		
	CO1	Ability to understand basics of Cell Biology: Structure and functions of cell organells
	CO2	Ability to understand structure and function of nucleus and chromosomes
	CO3	Ability to understand molecular basis of life
	CO4	Ability to understand structure, replication, alterations in the genetic material

Course Outcomes	Program Outcomes									PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3
CO1	2	1	2	2	2	3	1	2	3	2	3	1
CO2	2	2	1	2	3	2	2	2	2	1	2	1
CO3	2	3	3	2	3	1	3	2	1	3	2	3
CO4	3	3	3	3	3	2	3	2	1	3	3	3
CO5	3	2	2	3	3	3	3	2	2	2	2	2
Average	2.40	2.20	2.20	2.40	2.80	2.20	2.40	2.00	1.80	2.20	2.40	2.00

	CO5	Ability to understand gene organization, transcription, translation and regulation of gene expression

Class		TYBSc
Subject Code		91433
Subject Name		Genetics and Evolution
Semester No		III
Teacher Name		Prof. Abhijit Kulkarni
Course Outcomes		
	CO1	Students will learn introduction to genetics and gert aquinted with various branches of genetics
	CO2	Problem solving related to Mendel's experiments will help students to learn applications of statistical tools
	CO3	Topics related to Cytogenetics will help students to know about chromosomal mutations and iits effects
	CO4	Students will get the knowlwdge of how earth originated and the events of evolution
	CO5	Knowledge of theories of organic evolution and formation of fossils will help them to study phylogenetic relationship

Course Outcomes	Program Outcomes									PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3
CO1	3	3	3	3	3	3	3	3	3	3	3	3
CO2	3	3	3	3	3	2	3	2	2	3	3	3
CO3	3	3	3	3	3	3	3	3	3	3	3	3
CO4	3	3	3	3	3	3	3	3	3	2	2	2
CO5	3	3	3	2	3	3	3	2	3	3	3	3
Average	3.00	3.00	3.00	2.80	3.00	2.80	3.00	2.60	2.80	2.80	2.80	2.80

Class		TYBSc
Subject Code		91443
Subject Name		Spermatophyta and Paleo Botany
Semester No		III
Teacher Name		Prof. B. M. Gaykar
Course Outcomes		
	CO1	Students get knowledge of higher plant diversity
	CO2	Students can identify the plants scietifically
	CO3	They would classify the plants on the basis of characters
	CO4	The age of plants and their evolutionary trend can be studied properly
	CO5	Students will understoods various classification system for plants.

Course Outcomes	Program Outcomes									PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3
CO1	2	2	2	3	3	3	2	1	2	2	2	2
CO2	3	2	2	2	2	3	2	2	2	2	2	3
CO3	2	3	3	3	2	3	2	3	3	3	3	2
CO4	2	2	3	2	2	2	2	2	2	3	3	2
CO5	2	3	3	3	2	3	2	3	3	3	3	2
Average	2.20	2.40	2.60	2.60	2.20	2.80	2.00	2.20	2.40	2.60	2.60	2.20

Class	TYBSc
Subject Code	91453
Subject Name	Horticulture and Floriculture
Semester No	III
Teacher Name	Prof. Abhijit Kulkarni
Course Outcomes	
CO1	Students will get the knowledge about horticultural plants, its marketing
CO2	students will get aquinted with methods of propagation of horticultural plants
CO3	students will get the knowledge about how pruning and traning of horticultural crops
CO4	production of dry flowers , cut flowers for market
CO5	concept of ornamental plants, vegetable and fruit gardening

Course Outcomes	Program Outcomes									PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3
CO1	2	2	2	3	3	3	2	1	2	2	2	2
CO2	3	2	2	2	2	3	2	2	2	2	2	3
CO3	2	3	3	3	2	3	2	3	3	3	3	2
CO4	2	2	3	2	2	2	2	2	2	3	3	2
CO5	2	2	3	2	2	2	2	2	2	3	3	2
Average	2.20	2.20	2.60	2.40	2.20	2.60	2.00	2.00	2.20	2.60	2.60	2.20

Class	TYBSc
Subject Code	91463
Subject Name	Computational Botany
Semester No	III
Teacher Name	Dr. Prasad Lamrood
Course Outcomes	
CO1	Students will get introduced with Biostatistics, various terms, sample and methods
CO2	Students will know about sampling the data and representation of data
CO3	Central tendancy and Various measures , measures of dispersion
CO4	Concept of probability, types, statistical tests to compare mean, correlation and regression
CO5	Various seed testing, plant growth indices, vegetation data analysis, satellite data analysis and indices

Course Outcomes	Program Outcomes									PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3
CO1	3	2	3	1	2	2	2	3	2	2	1	2
CO2	2	3	2	2	2	2	3	2	3	2	2	3
CO3	2	2	2	3	3	3	2	1	2	2	2	2
CO4	2	2	3	3	2	2	2	3	2	3	3	2
CO5	2	2	2	2	2	2	2	2	3	2	2	3
Average	2.20	2.20	2.40	2.20	2.20	2.20	2.20	2.20	2.40	2.20	2.00	2.40

Class	TYBSc
Subject Code	91414

Course Outcomes	Program Outcomes									PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3

Subject Name	Plant Physiology and Biochemistry	CO1	2	2	1	2	3	2	2	2	2	2	3	2
Semester No	IV	CO2	2	3	3	2	3	1	3	2	1	2	1	3
Teacher Name	Prof. B. M. Gaykar	CO3	3	3	3	3	3	2	3	2	1	3	3	3
Course Outcomes		CO4	3	2	3	2	1	2	2	3	2	3	2	2
CO1	Students get metabolic processes of plants	CO5	3	2	3	1	2	2	2	2	3	2	3	3
CO2	Process of food synthesis in plants	Average	2.60	2.40	2.60	2.00	2.40	1.80	2.40	2.20	1.80	2.40	2.40	2.60
CO3	Respiration in plants with exchange of gases													
CO4	aquented with enzyme functions at various reactions													
CO5	growth of plants and their development is calculated													

Class	TYBSc	Course Outcomes	Program Outcomes									PSOs		
Subject Code	91424		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3
Subject Name	Plant Ecology and Biodiversity	CO1	2	2	3	2	3	2	2	2	1	2	2	2
Semester No	IV	CO2	3	2	2	3	3	3	2	1	3	2	3	2
Teacher Name	Dr. Nisha Godse	CO3	2	3	2	2	2	2	3	3	2	3	2	3
Course Outcomes		CO4	2	2	2	1	2	1	2	2	2	1	1	1
CO1	Students will understand the core concepts of Plant Ecology	CO5	2	1	2	2	2	2	2	2	1	1	2	2
CO2	will able to understand the basic concepts of Biodiversity	Average	2.20	2.00	2.20	2.00	2.40	2.00	2.20	2.00	1.80	1.80	2.00	2.00
CO3	Will able to understand the types of Pollution and its control measures													
CO4	will able to understand the Biodiversity variation at the genetic,Species and ecosystem level													
CO5	Will able to understand differecnce Between Ex-Situ and In-situ Conservation. students will understand the classification of ecosystem.													

Class	TYBSc	Course Outcomes	Program Outcomes									PSOs		
Subject Code	91434		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3
Subject Name	Plant Pathology	CO1	3	2	3	2	3	2	2	2	1	2	2	2
Semester No	IV	CO2	2	2	2	3	3	3	2	1	3	2	3	2
Teacher Name	Prasad Y. Lamrood	CO3	2	3	2	2	2	2	3	3	2	3	2	3
Course Outcomes		CO4	2	2	2	3	3	3	2	1	3	2	3	2

	CO1	Students learnt about fundamentals of Plant pathology, basic terminologies, COntributions of Scients and Indian Institutes	CO5	2	3	2	2	2	2	3	3	2	3	2	3
	CO2	Concept of disease development and various defense stratgies exerted by the plant	Average	2.20	2.40	2.20	2.40	2.60	2.40	2.40	2.00	2.20	2.40	2.40	2.40
	CO3	Various parasitic Plant diseases and method for studying them.													
	CO4	Concept and types of non-parasitic diseases													
	CO5	Vaious method of plant disease control.													

Class	T.Y.B.Sc.	Course Outcomes	Program Outcomes									PSOs		
Subject Code	91444		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3
Subject Name	Medicinal and Economic Botany	CO1	2	2	2	2	2	2	2	2	2	2	2	2
Semester No	IV	CO2	2	2	2	2	2	2	2	2	2	2	2	2
Teacher Name	Mr. Sagar Bawake	CO3	2	2	2	2	2	2	2	2	2	2	2	2
Course Outcomes		CO4	2	2	2	2	2	2	2	2	2	2	2	2
CO1	Students will understands the concept of Pharmacognosy, classification of drugs.	CO5	2	2	2	2	2	2	2	2	2	2	2	2
CO2	Ability to understands Tridosha Concept as well as ayurvedic principles, and Ayurvrdic formulations.	Average	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
CO3	Ability to understands Drug adulteration,Methods of extraction, Methods of drug evaluation.													
CO4	Ability to understands medicinally important drugs.													
CO5	Ability to understands Ethnobotany, Concept of Economic Botany.													

Class	TYBSc	Course Outcomes	Program Outcomes									PSOs		
Subject Code	91454		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3
Subject Name	Plant Biotechnology	CO1	3	2	3	2	3	2	2	2	1	2	2	2
Semester No	VI	CO2	2	2	2	3	3	3	2	1	3	2	3	2
Teacher Name	Sudhir Bale	CO3	2	3	2	2	2	2	3	3	2	3	2	3
Course Outcomes		CO4	2	2	2	3	3	3	2	1	3	2	3	2
CO1	Ability to understand Plant tissue culture technique	CO5	2	3	2	2	2	2	3	3	2	3	2	3
CO2	Ability to understand concept of germplasm conservation & preservation	Average	2.20	2.40	2.20	2.40	2.60	2.40	2.40	2.00	2.20	2.40	2.40	2.40

	CO3	Ability to understand concept of transgenic plants as bioreactors
	CO4	Ability to understand biotechnology of Biological nitrogen fixation
	CO5	Ability of understand biotechnology & Society and Bioinformatics etc

			Course Outcomes	Program Outcomes									PSOs		
Class		TYBSc		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3
Subject Code		91464	CO1	3	3	3	3	3	3	3	3	3	3	3	3
Subject Name		Plant Breeding and Seed Technology	CO2	3	3	3	3	3	3	3	3	3	3	3	3
Semester No		IV	CO3	3	3	3	3	3	3	3	3	3	3	3	3
Teacher Name		Prof. Abhijit Kulkarni	CO4	3	3	3	3	3	3	2	3	2	2	2	2
Course Outcomes			CO5	3	3	3	3	3	2	3	3	3	3	3	3
	CO1	Students will get the knowledge about objectives, scope and methods of plant improvement	Average	3.00	3.00	3.00	3.00	3.00	2.80	2.80	3.00	2.80	2.80	2.80	2.80
	CO2	Students will get the knowledge about origin and production of polyploids and aneuploids for developing new varieties													
	CO3	Students will get aquinted with seed technology, scope and marketing of seeds													
	CO4	they will get the knowledge about seed certification, seed testing and seed production													
	CO5	Study of seed pathology and occurance of seed pests and diseases will help them to identify and select healthy seed													

			Course Outcomes	Program Outcomes									PSOs		
Class		TYBSc		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3
Subject Code		91474	CO1	3	3	3	3	3	3	3	3	3	3	3	3
Subject Name		Botany Practical on BO331, BO 332, BO 341, BO 345	CO2	3	3	3	3	3	3	3	3	3	3	3	3
Semester No		V	CO3	3	3	3	3	3	3	3	3	3	3	3	3
Teacher Name		Prof. Abhijit Kulkarni	CO4	2	2	2	2	2	2	2	2	2	2	2	2
Course Outcomes			CO5	3	3	3	3	3	3	3	3	3	3	3	3
	CO1	Students will get practical knowledge of diversity in cryptogams	Average	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80
	CO2	Students will learn the technique to study chromosome morphology & Karyotype analysis													

	CO3	Students will get hands on training in isolation and estimation of DNA and RNA
	CO4	Studnets will learn techniues to study plant tissues in detail
	CO5	Stuents will get aquinted with how cell cycle operates and its significance in reproductive biology

Class		TYBSc
Subject Code		91484
Subject Name		Practical II Based on BO 333,334,335
Semester No		IV
Teacher Name		Sudhir Bale
Course Outcomes		
	CO1	Ability to understand problems on genetics, Polytene chromosomes, translocation studies
	CO2	Ability to understand anatomy of gymnosperms, fossile specimens
	CO3	Ability to understand BOD, physiochemical properties of water, pH etc
	CO4	Ability to understand ecological data with the help of GPS and geographical maps
	CO5	Ability to understand Hybridization techniques, mutation breeding,seed processing etc.

Course Outcomes	Program Outcomes									PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3
CO1	3	2	1	1	3	2	2	2	1	1	2	3
CO2	1	3	2	2	2	1	3	2	3	2	3	2
CO3	2	1	2	3	1	3	2	1	2	3	1	2
CO4	2	2	3	2	2	2	2	3	2	3	3	3
CO5	2	2	2	2	2	2	2	2	3	2	2	1
Average	2.00	2.00	2.00	2.00	2.00	2.00	2.20	2.00	2.20	2.20	2.20	2.20

Class		TYBSc
Subject Code		91494
Subject Name		Practical
Semester No		VI
Teacher Name		Prasad Y. Lamrood
Course Outcomes		
	CO1	Students will learn to isolate and culture the pathogene
	CO2	Will learn about various plant diseases by macro and micromorphology.

Course Outcomes	Program Outcomes									PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PSO1	PSO2	PSO3
CO1	3	2	1	1	3	2	2	2	1	1	2	3
CO2	1	3	2	2	2	1	3	2	3	2	3	2
CO3	2	1	2	3	1	3	2	1	2	3	1	2
CO4	2	2	3	2	2	2	2	3	2	3	3	3
CO5	2	2	2	2	2	2	2	2	3	2	2	1
Average	2.00	2.00	2.00	2.00	2.00	2.00	2.20	2.00	2.20	2.20	2.20	2.20

	CO3	Will learn to prepare Bordeaux mixture and paste, Jivamrut, Learn about Koch's postulate
	CO4	Learn about geological time scale and various fossile tupes, Organic evolution
	CO5	Numerical problems on Population genetics

CO-PO Mapping

			Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
		1	11141	2.40	2.40	2.60	2.40	1.80	1.80	2.00	2.00	2.00
		2	11142	2.40	2.40	2.20	2.40	2.00	2.40	2.20	2.20	2.40
		3	11143	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.80
		4	12141	2.40	2.40	2.20	2.00	2.00	2.20	2.00	2.20	2.20
		5	12142	2.60	2.60	2.00	2.20	2.20	2.20	2.00	2.40	2.40
FY	FY	6	12143	2.60	2.00	2.20	2.20	2.20	2.00	2.40	2.40	2.60
		1	81411	3.00	3.00	3.00	3.00	3.00	2.40	2.00	2.40	1.60
		2	81421	2.60	2.40	2.60	2.60	2.80	2.20	2.80	2.80	2.00
		3	81412	3.00	3.00	2.80	3.00	2.80	2.40	2.60	2.00	2.00
		4	81422	2.40	2.20	2.80	2.00	2.00	2.00	3.00	3.00	2.20
SY	SY	5	81432	2.40	1.80	2.80	1.80	2.20	2.00	3.00	3.00	2.40
		1	91413	2.40	2.20	2.20	2.60	2.80	2.20	2.40	2.00	1.80
		2	91423	2.40	2.20	2.20	2.40	2.80	2.20	2.40	2.00	1.80
		3	91433	3.00	3.00	3.00	2.80	3.00	2.80	3.00	2.60	2.80
		4	91443	2.20	2.40	2.60	2.60	2.20	2.80	2.00	2.20	2.40
		5	91453	2.20	2.20	2.60	2.40	2.20	2.60	2.00	2.00	2.20
		6	91463	2.20	2.20	2.40	2.20	2.20	2.20	2.20	2.20	2.40
		7	91414	2.60	2.40	2.60	2.00	2.40	1.80	2.40	2.20	1.80
		8	91424	2.20	2.00	2.20	2.00	2.40	2.00	2.20	2.00	1.80
		9	91434	2.20	2.40	2.20	2.40	2.60	2.40	2.40	2.00	2.20
		10	91444	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
		11	91454	2.20	2.40	2.20	2.40	2.60	2.40	2.40	2.00	2.20
		12	91464	3.00	3.00	3.00	3.00	3.00	2.80	2.80	3.00	2.80
		13	91474	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80
		14	91484	2.00	2.00	2.00	2.00	2.00	2.00	2.20	2.00	2.20
TY	TY	15	91494	2.00	2.00	2.00	2.00	2.00	2.00	2.20	2.00	2.20

CO-PO ATTAINMENT

PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
1.248	1.248	1.352	1.248	0.936	0.936	1.04	1.04	1.04
1.248	1.248	1.144	1.248	1.04	1.248	1.144	1.144	1.248
1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	0.936
1.632	1.632	1.496	1.36	1.36	1.496	1.36	1.496	1.496
1.352	1.352	1.04	1.144	1.144	1.144	1.04	1.248	1.248
2.6	2	2.2	2.2	2.2	2	2.4	2.4	2.6
1.56	1.56	1.56	1.56	1.56	1.248	1.04	1.248	0.832
1.352	1.248	1.352	1.352	1.456	1.144	1.456	1.456	1.04
1.56	1.56	1.456	1.56	1.456	1.248	1.352	1.04	1.04
2.016	1.848	2.352	1.68	1.68	1.68	2.52	2.52	1.848
2.4	1.8	2.8	1.8	2.2	2	3	3	2.4
1.632	1.496	1.496	1.768	1.904	1.496	1.632	1.36	1.224
1.248	1.144	1.144	1.248	1.456	1.144	1.248	1.04	0.936
1.56	1.56	1.56	1.456	1.56	1.456	1.56	1.352	1.456
1.144	1.248	1.352	1.352	1.144	1.456	1.04	1.144	1.248
1.144	1.144	1.352	1.248	1.144	1.352	1.04	1.04	1.144
1.144	1.144	1.248	1.144	1.144	1.144	1.144	1.144	1.248
1.768	1.632	1.768	1.36	1.632	1.224	1.632	1.496	1.224
1.848	1.68	1.848	1.68	2.016	1.68	1.848	1.68	1.512
2.2	2.4	2.2	2.4	2.6	2.4	2.4	2	2.2
2	2	2	2	2	2	2	2	2
2.2	2.4	2.2	2.4	2.6	2.4	2.4	2	2.2
3	3	3	3	3	2.8	2.8	3	2.8
2.352	2.352	2.352	2.352	2.352	2.352	2.352	2.352	2.352
1.36	1.36	1.36	1.36	1.36	1.36	1.496	1.36	1.496
2	2	2	2	2	2	2.2	2	2.2

Percentage CO-PO ATTAINMENT

PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
52	52	52	52	52	52	52	52	52
52	52	52	52	52	52	52	52	52
52	52	52	52	52	52	52	52	52
68	68	68	68	68	68	68	68	68
52	52	52	52	52	52	52	52	52
100	100	100	100	100	100	100	100	100
52	52	52	52	52	52	52	52	52
52	52	52	52	52	52	52	52	52
52	52	52	52	52	52	52	52	52
84	84	84	84	84	84	84	84	84
100	100	100	100	100	100	100	100	100
68	68	68	68	68	68	68	68	68
52	52	52	52	52	52	52	52	52
52	52	52	52	52	52	52	52	52
52	52	52	52	52	52	52	52	52
52	52	52	52	52	52	52	52	52
52	52	52	52	52	52	52	52	52
68	68	68	68	68	68	68	68	68
84	84	84	84	84	84	84	84	84
100	100	100	100	100	100	100	100	100
100	100	100	100	100	100	100	100	100
100	100	100	100	100	100	100	100	100
100	100	100	100	100	100	100	100	100
84	84	84	84	84	84	84	84	84
68	68	68	68	68	68	68	68	68
100	100	100	100	100	100	100	100	100

CO-PSO MAPPING

		Course	PSO1	PSO2	PSO3
FY	1	11141	2.00	2.00	1.80
	2	11142	2.00	2.20	2.40
	3	11143	2.00	2.00	2.00
	4	12141	2.00	2.00	2.20
	5	12142	2.40	2.20	2.60
	6	12143	2.80	2.60	2.60
SY	1	81411	2.60	2.60	2.60
	2	81421	2.40	2.60	3.00
	3	81412	2.60	2.60	2.60
	4	81422	1.80	2.20	2.20
	5	81432	2.00	2.40	2.40
TY	1	91413	2.20	2.40	2.00
	2	91423	2.20	2.40	2.00
	3	91433	2.80	2.80	2.80
	4	91443	2.60	2.60	2.20
	5	91453	2.60	2.60	2.20
	6	91463	2.20	2.00	2.40
	7	91414	2.40	2.40	2.60
	8	91424	1.80	2.00	2.00
	9	91434	2.40	2.40	2.40
	10	91444	2.00	2.00	2.00
	11	91454	2.40	2.40	2.40
	12	91464	2.80	2.80	2.80
	13	91474	2.80	2.80	2.80
	14	91484	2.20	2.20	2.20
	15	91494	2.20	2.20	2.20

CO-PSO ATTAINMENT

Course	PSO1	PSO2	PSO3
11141	1.04	1.04	0.936
11142	1.04	1.144	1.248
11143	1.04	1.04	1.04
12141	1.36	1.36	1.496
12142	1.248	1.144	1.352
12143	2.8	2.6	2.6
81411	1.352	1.352	1.352
81421	1.248	1.352	1.56
81412	1.352	1.352	1.352
81422	1.512	1.848	1.848
81432	2	2.4	2.4
91413	1.496	1.632	1.36
91423	1.144	1.248	1.04
91433	1.456	1.456	1.456
91443	1.352	1.352	1.144
91453	1.352	1.352	1.144
91463	1.144	1.04	1.248
91414	1.632	1.632	1.768
91424	1.512	1.68	1.68
91434	2.4	2.4	2.4
91444	2	2	2
91454	2.4	2.4	2.4
91464	2.8	2.8	2.8
91474	2.352	2.352	2.352
91484	1.496	1.496	1.496
91494	2.2	2.2	2.2

Percentage CO-PSO ATTAINMENT

Course	PSO1	PSO2	PSO3
11141	52	52	52
11142	52	52	52
11143	52	52	52
12141	68	68	68
12142	52	52	52
12143	100	100	100
81411	52	52	52
81421	52	52	52
81412	52	52	52
81422	84	84	84
81432	100	100	100
91413	68	68	68
91423	52	52	52
91433	52	52	52
91443	52	52	52
91453	52	52	52
91463	52	52	52
91414	68	68	68
91424	84	84	84
91434	100	100	100
91444	100	100	100
91454	100	100	100
91464	100	100	100
91474	84	84	84
91484	68	68	68
91494	100	100	100