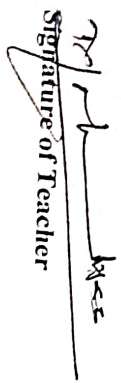


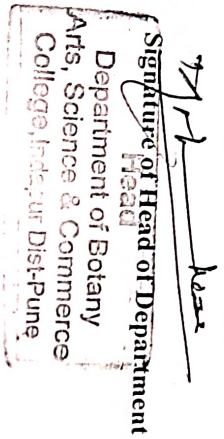
Name Of The Teacher : Dr. Mahadik B. B.
Semester I

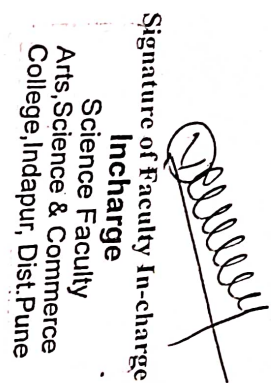
Year : 2020-2021

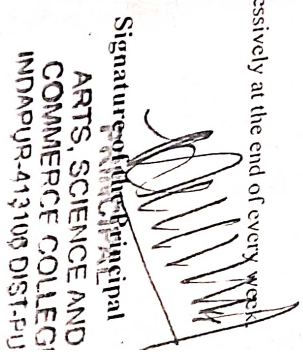
Taxonomy of Angiosperms And Plant Ecology									
Paper I					S.Y.B.Sc.				
Part I : Teaching Plan					Part II : Evaluation of Plan				
1 Sr. No.	2 Month	3 Week	4 No. of working days	5 No. of periods available	6 Topics to be taught	7 No. of periods engaged	8 Topics taught	9 Deviation in periods	10 Remarks
					Introduction to Angiosperms Taxonomy 2 Systems of classification Comparative account of various systems of classification Artificial system- Carl Linnaeus Natural system- Bentham and Hooker Phylogenetic system- Engler and Prantl APG system- A brief review		Introduction to Angiosperms Taxonomy 2 Systems of classification Comparative account of various systems of classification Artificial system- Carl Linnaeus Natural system- Bentham and Hooker Phylogenetic system- Engler and Prantl APG system- A brief review		
July 2021	2 & 4	11		7		7			
August 2021	1 & 2	11		8	Study of Plant Families Annonaceae, Brassicaceae, Myrtaceae, Rubiaceae, Solanaceae Apocynaceae, Nyctaginaceae and Amaryllidaceae	8	Study of Plant Families Annonaceae, Brassicaceae, Myrtaceae, Rubiaceae, Solanaceae Apocynaceae, Nyctaginaceae and Amaryllidaceae	1	Extra lecture v conduct
Sept 2021	1 & 2	12		5	Botanical Nomenclature	5	Botanical Nomenclature	Nil	--

4	Sept 2021	3 & 4	12	6	Introduction to ecology Definition, concept, scope, Methods of vegetation sampling	6	Introduction to ecology Definition, concept, scope, Methods of vegetation sampling	
5	Oct 2021	1 & 2	12	4	Ecological grouping of the plants	4	Ecological grouping of the plants	Nil
1	The plan should be prepared in duplicate.							
2	One copy of the plan should be submitted at the beginning of the term after filling up columns 1 to 6.							
3	The second copy must be retained by the teacher and submitted at the end of the term. Part second of the plan i. e. columns 7 to 10 must be filled up progressively at the end of every week.							


Signature of Teacher

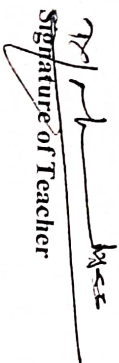

Signature of Head of Department
Head
Department of Botany
Arts, Science & Commerce
College, Indapur Dist-Pune

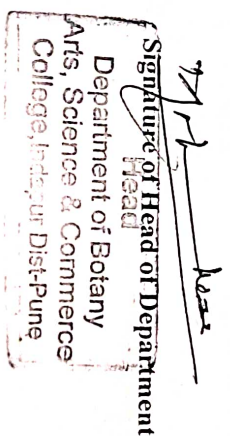

Signature of Faculty In-charge
In-charge
Science Faculty
Arts, Science & Commerce
College, Indapur, Dist. Pune

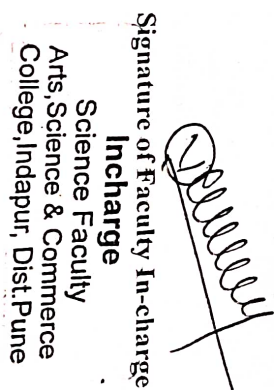

Signature of the Principal
ARTS, SCIENCE AND
COMMERCE COLLEGE
INDAPUR-413108 Dist-PJ

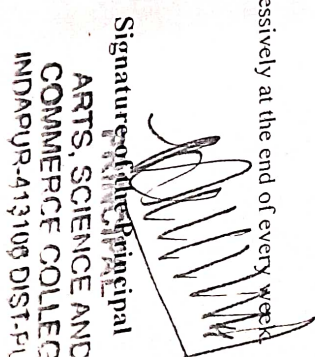
4	Sept 2021	3 & 4	12	6	Introduction to ecology Definition, concept, scope, Methods of vegetation sampling	6	Introduction to ecology Definition, concept, scope, Methods of vegetation sampling	
5	Oct 2021	1 & 2	12	4	Ecological grouping of the plants	4	Ecological grouping of the plants	Nil

- 1 The plan should be prepared in duplicate.
- 2 One copy of the plan should be submitted at the beginning of the term after filling up columns 1 to 6.
- 3 The second copy must be retained by the teacher and submitted at the end of the term. Part second of the plan i. e. columns 7 to 10 must be filled up progressively at the end of every week.


Signature of Teacher


Signature of Head of Department
Head
Department of Botany
Arts, Science & Commerce
College, Indapur Dist-Pune


Signature of Faculty In-charge
In-charge
Science Faculty
Arts, Science & Commerce
College, Indapur, Dist. Pune


Signature of the Principal
ARTS, SCIENCE AND
COMMERCE COLLEGE
INDAPUR-413106 DIST-P.

Arts, Science and Commerce College, Indapur, Dist-Pune Teaching And Evaluation Plan

Name of the teacher: Dr. Kabnorkar P.S.
Semester: I

Year 2020-2021

Subject: Plant Physiology

Paper: II

Class: S.Y. B. Sc

Part I : Teaching Plan									
1	2	3	4	5	6	7	8	9	10
Sr. No.	Month	Week	No. of working days	No. of periods available	Topics to be taught	No. of periods engaged	Topics taught	Deviation in periods	Remarks
1	Nov 2020	3 & 4	9	6	Introduction to Plant Physiology 1. Introduction and Scope 2. Applications of plant physiology Absorption of water 1. Role of water in plants 2. Mechanisms of water absorption with respect to crop plants 3. Factors affecting rate of water absorption Ascent of sap 1. Introduction and definition	6	Introduction to Plant Physiology 1. Introduction and Scope 2. Applications of plant physiology Absorption of water 1. Role of water in plants 2. Mechanisms of water absorption with respect to crop plants 3. Factors affecting rate of water absorption Ascent of sap 1. Introduction and definition	Nil	
2	Dec 2020	1 & 2	6	6	Transpiration pull or cohesion-tension theory, evidences and objections 3. Factors affecting ascent of sap Transpiration 1. Definition, Types of transpiration - cuticular, lenticular and stomatal 2. Structure of stomata, Mechanism of opening and closing of stomata -	6	Transpiration pull or cohesion-tension theory, evidences and objections 3. Factors affecting ascent of sap Transpiration 1. Definition, Types of transpiration - cuticular, lenticular and stomatal 2. Structure of stomata, Mechanism of opening and closing of stomata -	Nil	

						Steward's hypothesis, 3. Active K ⁺ transport mechanism 4. Factors affecting the rate of transpiration 5. Nitrogen metabolism 1. Introduction and role of nitrogen in plants 2. Nitrogen fixation by <i>Rhizobium</i> and BGA 3. Symbiotic nitrogen fixation, nitrogenase enzyme-structure and function	3. Active K ⁺ transport mechanism 4. Factors affecting the rate of transpiration 5. Nitrogen metabolism 7L 1. Introduction and role of nitrogen in plants 2. Nitrogen fixation by <i>Rhizobium</i> and BGA 3. Symbiotic nitrogen fixation, nitrogenase enzyme-structure and function		
	Transamination					4. Non-symbiotic nitrogen fixation 5. Importance and production technique of BGA 6. Denitrification, ammonification and nitrification 7. Reductive amination and transamination	Non-Symbiotic nitrogen fixation 5. Importance and production technique of BGA 6. Denitrification, ammonification and nitrification 7. Reductive amination and transamination		
	Seed dormancy and germination					6. Seed dormancy and germination 1. Definition, types of seed dormancy and germination 2. Methods to break seed dormancy	. Seed dormancy and germination 1. Definition, types of seed dormancy and germination 2. Methods to break seed dormancy		
3	Dec 2020	3 & 4	11	6				1	Extra le was cor on sun
4	January 2021	1 & 2	11	6		Metabolic changes during seed germination 4. Role of phytohormones to improve seed germination & Vigor Index	3. Metabolic changes during seed germination 4. Role of phytohormones to improve seed germination & Vigor Index	Nil	--

Name of the Teacher:- Dr. Kabnorkar P.S.

Semester II

Paper II : Plant Biotechnology

Year : 2020-2021

Sr.No.	Month	Week	Part I : Teaching Plan			No. of periods engaged	Part II : Evaluation of Plan		Deviation in periods	Rem
			No. of working days	No. of periods available	Topics to be taught		8	9		
1	March 2021	3 & 4	11	55	Introduction to Plant Biotechnology 1. History and definition 2. Scope and importance of plant biotechnology 3. Current status of biotechnology in India. Current status of biotechnology in India. Current status of biotechnology in India.	5	Introduction to Plant Biotechnology 1. History and definition 2. Scope and importance of plant biotechnology 3. Current status of biotechnology in India.	Nil	1	Ext lect was con
2	April 2021	1 & 2	6	30	Structure and function of xylem, phloem and cambium Plant Tissue Culture 1 Concept of plant tissue culture and cellular totipotency 2 Basic techniques: Types of culture	3	Structure and function of xylem, phloem and cambium Plant Tissue Culture 1 Concept of plant tissue culture and cellular totipotency 2 Basic techniques: Types of culture	Nil	1	Ext lect was con
3	April 2021	3 & 4	6	30	3. Media preparation, sterilization, inoculation & Incubation 4. Hardening and Applications with reference to: Micropropagation	3	3. Media preparation, sterilization, inoculation & Incubation 4. Hardening and Applications with reference to: Micropropagation	Nil	1	Ext lect was con

					5. Somaclonal variation & Haploid production 6. Protoplast fusion & Somatic hybrids 7. Embryo rescue & Production of secondary metabolites 8. Commercial Plant Tissue culture laboratories in Maharashtra and India.		5. Somaclonal variation & Haploid production 6. Protoplast fusion & Somatic hybrids 7. Embryo rescue & Production of secondary metabolites 8. Commercial Plant Tissue culture laboratories in Maharashtra and India.
					Single Cell Protein (SCP) 1. Concept and definition 2. Importance of proteins in diet 3. Production of SCP from <i>Spirulina</i> and Yeast 4. Importance & acceptability of SCP		Single Cell Protein (SCP) 1. Concept and definition 2. Importance of proteins in diet 3. Production of SCP from <i>Spirulina</i> and Yeast 4. Importance & acceptability of SCP
					Plant Genetic Engineering 1. Introduction, concept 2. Tools of genetic engineering (restriction enzymes, ligases, plasmid vectors) 3. Gene cloning Technique 4. Applications of plant genetic engineering: insect pest resistance, herbicide resistance		Plant Genetic Engineering 1. Introduction, concept 2. Tools of genetic engineering (restriction enzymes, ligases, plasmid vectors) 3. Gene cloning Technique 4. Applications of plant genetic engineering: insect pest resistance, herbicide resistance
3	April 2021	3 & 4	12	9	8	1	
4	May 2021	3 & 4	12	5	5		

Name of the teacher: Mahadik B.B.

Year: 2020-21

Semester: I

Semester: II

Paper: Plant Anatomy And Embryology

Year : 2020-2021

Part I : Teaching Plan									
1	2	3	4	5	6	7	8	9	10
Sr. No.	Month	Week	No. of working days	No. of periods available	Topics to be taught	No. of periods engaged	Topics taught	Deviation in periods	Remarks
					Introduction Definition, Scope of plant anatomy Epidermal tissue system Structure, types and functions of epidermis, Stomata Epidermal outgrowths- Mechanical tissue system a) Inflexibility, b) Incompressibility, c) Inextensibility and d) Shearing stress		Introduction Definition, Scope of plant anatomy Epidermal tissue system Structure, types and functions of epidermis, Stomata Epidermal outgrowths- Mechanical tissue system a) Inflexibility, b) Incompressibility, c) Inextensibility and d) Shearing stress Vascular tissue system: Structure and function of xylem, phloem and cambium		
1	Dec 2020	2 & 4	11	8	Normal secondary growth Introduction Normal secondary growth in dicotyledonous stem Development of annual rings, periderm, bark, tyloses and lenticel Anomalous secondary growth Introduction Causes of anomalous secondary growth Anomalous secondary growth in:	8	Normal secondary growth Introduction Normal secondary growth in dicotyledonous stem Development of annual rings, periderm, bark, tyloses and lenticel Anomalous secondary growth Introduction Causes of anomalous secondary growth Anomalous secondary growth in:	Nil	--
2	Jan 2021	1 & 3	7	7	Anomalous secondary growth Causes of anomalous secondary growth Anomalous secondary growth in:	7	Anomalous secondary growth Causes of anomalous secondary growth Anomalous secondary growth in:	1	Extra lecture was conducted

3	Sept 2021	1 & 2	12	5	Plant Embryology ntroduction Microsporangium and male gametophyte tetrasporangiate anther Types of tapetum Sporogenous tissue Microsporogenesis Types of microspore tetrad Male gametophyte: structure and development of male gametophyte	5	Plant Embryology ntroduction Microsporangium and male gametophyte tetrasporangiate anther Types of tapetum Sporogenous tissue Microsporogenesis Types of microspore tetrad Male gametophyte: structure and development of male gametophyte	Nil	--
4	Sept 2021	3 & 4	12	4	Megasporangium and female gametophyte Structure Types of ovules Types of megaspore tetrads Female gametophyte: structure of typical embryo sac Types of embryo sacs – monosporic, bisporic and tetrasporic	4	Megasporangium and female gametophyte Structure Types of ovules Types of megaspore tetrads Female gametophyte: structure of typical embryo sac Types of embryo sacs – monosporic, bisporic and tetrasporic		--
					Pollination and Fertilization: Introduction and definition Types of pollination Germination of pollen grain Entry of pollen tube- porogamy; mesogamy and chalazogamy Double fertilization and its significance Endosperm and embryo		Pollination and Fertilization: Introduction and definition Types of pollination Germination of pollen grain Entry of pollen tube- porogamy; mesogamy and chalazogamy Double fertilization and its significance Endosperm and embryo	1	Extra lecture was conducted
	Oct 2021	1 & 2	12	6		6			

