

Arts, Science and Commerce College, Indapur, Dist. Pune

TEACHING AND EVALUATION PLAN

Name of the teacher: Dr. Mahadik H. B. Semester: I							Year: 2018-19		
Paper I Taxonomy of Angiosperms And Plant Ecology							S.Y.B.Sc.		
Part I : Teaching Plan							Part II : Evaluation of 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 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		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		
1	July 2018	2 & 3	11	11	APG system- A brief review	7	APG system- A brief review	Nil	
2	August 2018	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 was conducted
3	Sept 2018	1 & 2	12	5	Botanical Nomenclature	5	Botanical Nomenclature	Nil	
4	Sept 2018	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		

Year: 2018-2019

Name of the teacher: Suryawanshi A.V.

Class: S.Y.B.

Semester: I

Paper: II

Subject: Plant Physiology

Sc

Part I: Teaching Plan					Part II: Evaluation of 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 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	--
1	Dec 2018	3 & 4	9	6	2. 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	6	2. 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	Nil	--
2	Dec 2018	1 & 2	12	6	2. Structure of stomata; Mechanism		2. Structure of stomata; Mechanism	Nil	--

					of opening and closing of stomata – 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		of opening and closing of stomata – Steward's hypothesis, 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		
					4. Non-symbiotic nitrogen fixation 5. Importance and production technique of BGA 6. Denitrification, ammonification and nitrification 7. Reductive amination and transamination 6. Seed dormancy and germination 1. Definition, types of seed dormancy and germination 2. Methods to break seed dormancy	06	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 1. Definition, types of seed dormancy and germination 2. Methods to break seed dormancy		Extra lecture was conducted on Sunday
3	January 2019	3 & 4	11	6				1	
4	January 2019	1 & 2	11	6	Metabolic changes during seed germination, in phytohormones to improve seed germination & Vigor	6	3. Metabolic changes during seed germination 4. Role of phytohormones to improve seed germination & Vigor Index	Nil	

Name of the teacher : Dr. Kabnoorkar P.S.

Semester II

Paper II : Plant Biotechnology

Year : 2018-2019

Part I : Teaching Plan						Part II : Evaluation of 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 to Plant Biotechnology 1. History and definition 2. Scope and importance of plant biotechnology 3. Current status of biotechnology in India 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		Introduction to Plant Biotechnology 1. History and definition 2. Scope and importance of plant biotechnology 3: Current status of biotechnology in India. 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		
11	Dec 2018	3 & 4	11	5		5		Nil	

						3. Media preparation, sterilization, inoculation & Incubation 4. Hardening and Applications with reference to: Micropropagation 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.			
2	Dec2018	1 & 2	11	6	7	3. Media preparation, sterilization, inoculation & Incubation 4. Hardening and Applications with reference to: Micropropagation 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.	1	Extra lecture was conducted	
						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, 5. Abiotic stress-tolerance & herbicide resistance			
12	9	3	Jan 2019	4	12	9	8	Extra Lecture	

4	Jan 2019	3 & 4	12	5	Genomics, Proteomics and Bioinformatics 1. Genomics- concept & types, 2. Methods used for whole genome sequencing 3. Proteomics-concept, types 4. Methods used in proteome analysis 5. Bioinformatics-concept, database and its classification, data retrieval tools.	5	Genomics, Proteomics and Bioinformatics 1. Genomics- concept & types, 2. Methods used for whole genome sequencing 3. Proteomics-concept, types 4. Methods used in proteome analysis 5. Bioinformatics-concept, database and its classification, data retrieval tools.		
5	Feb 2019	1 & 2	12	5	Bioremediation 1. Introduction and concept, Microbial remediation 2. Phytoremediation Biofuel technology 1. Definition, Concept and types of Renewable and nonrenewable energy sources 2. Definition and concept of Biogas, Bioethanol & Biobutanol, 3. Biodiesel & Biohydrogen	5	Bioremediation 1. Introduction and concept, Microbial remediation 2. Phytoremediation Biofuel technology 1. Definition, Concept and types of Renewable and nonrenewable energy sources 2. Definition and concept of Biogas, Bioethanol & Biobutanol, 3. Biodiesel & Biohydrogen	1	Extra lecture was conducted

Signature of Teacher

Signature of Head of Department

Signature of Faculty In-charge

Signature of the Principal



Incharge
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College, Indapur, Dist. Pune

Principal
Arts, Science & Commerce
College, Indapur, Dist. Pune

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TEACHING AND EVALUATION PLAN

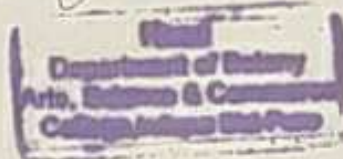
Name of the teacher: Shaikh M.D. Semester: I						Year: 2018-2019			
Subject: Plant Anatomy and Embryology						Paper: I		Class: S.Y.B. Sc	
Part I : Teaching Plan						Part II : Evaluation of Plan			
1	2	3	4	5	6	7	8	9	10
Sr. No.	Month	Week	No. of working days	No. of periods available	Topics to be taught	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 3.2 Vascular tissue system: Structure and function of xylem, phloem and cambium		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 3.2 Vascular tissue system: Structure and function of xylem, phloem and cambium		
1	Jan. 2019	1 & 2	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	8	Normal secondary growth Introduction Normal secondary growth in dicotyledonous stem Development of annual rings, periderm, bark, tyloses and lenticel Anomalous secondary growth Introduction	Nil	-
	Jan 2019	3&4	11	7		7		1	Extra lecture was conducted

					Causes of anomalous secondary growth Anomalous secondary growth in:		Causes of anomalous secondary growth Anomalous secondary growth in:		
					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		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		
3	Feb 2019	1 & 2	12	5		5		Nil	--
					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		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	Feb 2019	3 & 4	12	4		4			--
					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		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		Extra lecture was conducted
6	Mar 2019	1 & 2	12	6		6			

				Endosperm and embryo Endosperm: Types – nuclear, helobial and cellular, Structure of Dicotyledonous and Monocotyledonous embryo		Endosperm and embryo Endosperm: Types – nuclear, helobial and cellular, Structure of Dicotyledonous and Monocotyledonous embryo	
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SMD
Signature of Teacher

M. L. N. S.
Signature of Head of Department



[Signature]
Signature of Faculty In-charge

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