

S.B.V.P.Samaj's
Sahakar Maharshi Bhausaheb Santuji Thorat College of Arts, Science & Commerce,
Sangamner- 422605

Teaching Plan of Theory Courses

Academic Year:2018-2019

Term/Semester:I Class: S.Y.BScSubject:Taxonomy Of Angiosperms And Plant Community

Month & Year	Title of the Topic	No. of Lectures	Test / Tutorial
15 June 2018	Admission Process 1. Introduction to Plant taxonomy 1 Definition, scope, objectives and importance 2 Identification, classification, nomenclature 3 Concept of Systematics	03	Tutorial – 1
July-2018	2. System of classification 1 Types of systems with their merits and limitations- a)Artificial system- Carl Linnaeus ,b)Natural system -Bentham and Hooker, c) Phylogenetic system- Engler and Prantl 3.Taxonomic literature Flora, monograph, revisions, manuals, journals, periodicals and references books.	06	
	4.Source of data for systematics 1. Morphology 2. Anatomy 3. Cytology 4. Embryology 5. Photochemistry 6. Molecular biology	02	
		06	
Aug. 2018	5.Botanical nomenclature 1. History 2. Binomial nomenclature 3. ICBN- principles 4. Rules of nomenclature 5. Coining of generic names and specific epithets. 6. Ranks and endings of taxa names 7. Principle of priority 8. Effective and valid publications 9. Single and double authority citation 10. <i>Nominaconservanda</i> 6.Study of plant family Study of following families with reference to systematic position, salient features, floral formula, floral diagram and any five examples with their economic importance – Annonaceae, Meliaceae, Myrtaceae, Rubiaceae, Solanaceae, Asclepiadaceae, Euphorbiaceae and Amaryllidaceae	06	Test – 1
		11	
Sept-2018	7.Computer in Taxonomy 1. Concept of herbarium their advantages and limitations 2. Digital /e-herbarium and their advantages 3. Data bases: concept and needs. 4. Use of computer in plant classification	04	
	8.Introduction to Ecology 1. Definition 2. Concept 3. Autecology and synecology 4. Ecosystem and its components: biotic and abiotic. 5. Food chain 6. Food web 7. Ecological pyramids	05	
Oct. 2018	9.Ecological grouping of the plant Ecological grouping of the plants with reference to their significance of adaptive external and internal features: a) Hydrophytes, b) Mesophytes c)Xerophytes d) Halophytes with examples.	05	Tutorial – 2 & Field Visit

Sign.of the Subject Teacher

Sign of Head of Department

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Teaching Plan of Theory Courses

Academic Year:2018-2019

Term/Semester:II Class: S.Y.BSc Subject:Plant Anatomy and Embryology

Month & Year	Title of the Topic	No. of Lectures	Test / Tutorial
15Nov. 2018	A. Plant anatomy		Tutorial – 3
	1. Introduction Definition, scope of plant anatomy and types of tissues	02	
	2. Epidermal tissue system Structure and function of epidermal tissue system, uniseriate and multiseriateepidermis, stomata: structure, types and functions, epidermal outgrowth: glandular and non-glandular	04	
Dec-2018	3. Mechanical tissue system Principles involved in distribution of mechanical tissues – inflexibility, incompressibility, inextensibility and shearing stress, tissues providing mechanical support, their distribution in leaf, stem and root of dicots and monocots.	04	
	4. Vascular tissue system Structure and function of xylem, phloem and cambium	04	
	5. Normal secondary growth Introduction, cambium and its role, process in stems of Helianthus annuus and Annonasqamosa, extrastelar and intrastelar secondary growth, annual rings, periderm, bark, tyloisandlenticel	05	
	6. Anomalous secondary growth Introduction, causes, anomalous secondary growth in dicot stem (Bignonia) dicot root(Raphanus) and monocot stem (Dracaena).	05	
Jan-2019.	B. Plant Embryology		Tutorial – 4 & Field Visit
	7. Introduction Definition and scope of plant embryology	01	
	8. Microsporangium and male gametophyte a. Microsporangium: structure of tetrasporangiate anther, types of tapetum, sporogenous tissue. b. Microsporogenesis: process and its types, types of microspore tetrad. c. Male gametophyte: structure and development of male gametophyte.	05	
	9. Megasporangium and female gametophyte a. Megasporangium: structure, types of ovules – anatropous, orthotropous, amphitropous, campylotropous, circinotropous. b. Megasporogenesis: tenuinucellate and crassinucellate ovules, types of megaspore tetrads. c. Female gametophyte: structure of typical embryo sac, types of embryo sacs with examples – monosporic, bisporic and tetrasporic.	07	
Feb 2019	10. Fertilization Mechanism of pollination- entomophily, anemophily, hydrophily, zoophily, germination of pollen grain, double fertilization (syngamy and triple fusion) and its significance.	05	
	11. Endosperm and embryo a. Endosperm: Types – nuclear, helobial and cellular. b. Embryogeny: structure of dicot and monocot embryo and seed formation.	06	
Mar 2019	Practical Exam		