

## Teaching Plan of Theory Courses

Academic Year: 2013-2014

Term/Semester:I&amp;II Class: F.Y.BSc Subject: INDUSTRIAL BOTANY

Month & Year	Title of the Topic	No. of Lectures	Test / Tutorial
15 June	Admission Process		
July-2013	<b>1. Introduction to industrial Botany</b> 1. Concept of industrial Botany..2.Plant resource and Industries :Food, Fodder ,Fibers, Medicine, Timber, Dyes, Gum, Tannins	02	Tutorial – 1
	<b>2. Floriculture industry</b> 1. Introduction to floriculture.2.Important floriculture crops .Open cultivation practices, harvesting and marketing of Tuberose.3.Green house technology: Concept, advantage and limitation.4.Cultivation practices, harvesting and marketing of Rose and Gerbera.	08	
Aug. 2013	<b>3. Plant nursery Industry</b> 1. Concept and type of Nurseries: Ornamentalplant nursery, Fruit plant nursery medicinal plant nursery, vegetable plant nursery, orchid plant nursery, forest plant nursery. 2.Propagation method :Seed propagation ,Natural vegetative propagation Artificial vegetative propagation(Cutting—stem, Layering-Air layering, Grafting-stone grafting and Approach grafting ,Budding-T-budding)	08	Test – 1
Sept-2013	<b>4 Plant tissue culture Industry</b> 1. Concept of tissue culture. 2. Culturetechnique: Types of explants, preparation of media, Methods of sterilization, inoculation technique, inoculation and hardening. 3. Commercial significance.	06	
	<b>5.Agri Industries</b> 1. Organic farming: Concept, need of organic farming, Types of organic fertilizer, advantage and limitation .2.Seed industries: Importance of seed industries, seed production, seed processing and seed marketing with reference to cotton. Major seed industries and corporation of India.	08	
Oct. 2013	<b>6. Mushroom Industries</b> Mushroom cultivation: Plant resources, cultivation practices of Oyster mushroom use of mushroom, value added product, commercialsignificance.	04	Tutorial – 2 &FieldVisit
15Nov.2013	<b>1. Bio-fuel Industry</b> 1. Introduction and advantage.2. Concept of Bio-fuel and its need.3 .Plant used for bio-fuel production.4.Biodiesel production from Caster.5.Commercial significance.	06	Tutorial – 3
Dec-2013	<b>2. Bio-pesticide Industry</b> 1. Concept of bio-control; Integrated Pest Management (I.P.M.).2.Importance of bio-pesticides..3. Types of bio-pesticides: Indiarra ,Azadiractin . 4. Commercial significance.	06	
	<b>3.Industrial Mycology</b> 1. Introduction .2.Important genera of fungi used in industries and their products .3.Product and application of Trichoderma ,Penicillium ,Aspergillus and yeast .4. Commercialsignificance.	06	
Jan-2014.	<b>4 .Bio-fertilizer Industry</b> 1. Bio-fertilizer: Concept and need..2. Type of bio-fertilizer: Nitrogen fixing bio-Fertilizer; Rhizobium, Blue green algae .Anabaena associated with Azolla .Phosphate solubilizing bio-Fertilizer: Bacteria and fungi. 3. Commercial significance.	06	Tutorial – 4 & Field Visit
	<b>5. Fruit Processing Industry</b> 1. Fruit processing: Concept and need .2.Cold storage. 3. Types of fruit processing (canned fruit, dried fruit chips. Fruit pulp, squash, jam, jelly, pickle and ketchups).4.commercial significance.	06	
Feb 2014	<b>6.Plant Pharmaceutical Industry</b> 1. Concept and advantage..2. Type of pharmaceutical product: Churn, Asava and Arishta..3. Drug plant with reference to botanical source, active principles and medicinal use of Adathodazeylanica,Tinosporacordifolia and Asperagusracemosus. 4.Manufacture of Churn(Triphala churn ) .Arishta(Ashokarishta).and Asava (Kumariasava)..5. Concept of nutraceuticals and cosmeceuticals. .6.Commercial significance of Amla and Aloe.	06	
Mar 2014	EXAM		