Rajarshi Shahu Mahavidyalaya, Latur

(Autonomous) Structured Work Plan for Teaching (Jun – 2018 to Oct. 2018)

Details of Classes to be taught

Sr. No.	Class	Name of Professor	Subject	Paper
1	B.Sc.III	Prof. S. N. Shinde	Botany	Plant Pathology I
2	M.Sc.II		Jan J	Angiosperms Systematics

Summary of Lesson Plan:

Sr. No.	Subject	Unit and Chapter to be covered	Date	No. of Lectures	Academic activities to be organized	No. of Test / Assignment with topic and date
1	Unit-I: Fundamental s of Plant Pathology (10 L)	 Scope, importance, history and advancement of plant pathology. Classification of plant diseases on the basis of causal organism and symptoms. Field and laboratory diagnosis- Isolation of plant pathogens from infected plant parts, soil and air. Pure culture technique, Koch's postulates for pathogenicity. 	04/07/18 To 19/08/18	02 02 02 02 02 02		
2	UNIT-II: Plant Diseases-I (12 L)	 Symptoms, causal organisms, disease cycle and control measures of : 1. Green ear of Bajra. 2. leaf spot of tomato. 3. Rust of Soybean. 4. Red rot of Sugarcane. 5. Angular leaf spot of cotton. 6. Yellow vein mosaic of Bhendi 	10/08/18 To 27/09/18	03 02 02 03 01 01		
3	UNIT-III: Plant Diseases-II (13 L)	 Symptoms, causal organisms, disease cycle and control measures of: 1. Ergot of Bajara, 2. Whip smut of Sugarcane, 3. Oil spot disease of pomegranate, 4. Leaf spot of Turmeric (<i>Colletotrichum capsici</i>) 5. Citrus canker, 	28/09/18 To 31/10/18	03 03 03 03 01 01 01		

		6. Bunchy top of banana7. Little leaf of Brinjal			
4	UNIT-IV: Plant Disease Development (10 L)	 Definition of disease, disease pyramid Disease development- Mode of entry of pathogens (through stomata, wounds, root hairs and buds), Factors affecting disease development- Temperature, moisture, wind and soil pH, Dispersal of plant pathogens (by air, water, insects and animal. 	28/09/18 To 31/10/18	02 03 03 03 03	

Head

Sr. No.	Subject	Unit and Chapter to be covered	Date	No. of Lectures	Academic activities to be organized	No. of Test / Assignm ent with topic and date
1	Credit-I: Modern Trends in Taxonomy: (15L)	 Aims, principles and practices in taxonomy. Botanical Nomenclature: Brief history, Scientific names, ICN, Principles, typification, Principle priority, effective and valid publication, ik of taxa. Tools of taxonomy: Floras, monographs, revisions, websites. Herbarium and botanicalgardens, their role in teaching, research and conservation, important herbaria and botanicgardens of the World. Botanical Survey of India. Floristics: Need and significance. History of botanical exploration in indiaand recent workswith special emphasis on Maharashtra. Morphological features used in identification. Artificial dichotomous keys. Biodiversity, types, importance and methods of conservation. Taxonomic Structure: Taxonomic hierarchy, The species concept, Categories and ranksPrinciples& methods of taxonomy: Taxonomy in relation to morphology and anatomy. 	01/07/18 To 27/07/18	05 05 05		
2	Credit- II: Classification System: (15L)	 Importance and need for classification. Criteria used for classification; Phases of plant classification. Overview of pre- and post-Darwinian systems of classification. Artificialsystems of classification - 	29/07/18 To 30/08/18	05		

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		Theophrastus, Linnaeus.			
		3. Natural system of classification -			
		Bentham and Hooker.		05	
		4. Phylogenetic systems of		05	
		classification – Takhtajan.			
		5. APGsystem of classification,			
		contributors, A .P.web.			
		6. Plant Speciation: Allopathic /		05	
		Abrupt / Sympatric / Hybrid /			
		Apomictic speciation, Isolating			
		mechanisms.			
		(Systematic position, general			
		characters, distinguishing features,			
		floral formula, floral diagram and		02	
	Credit- III:	economic importance).		02	
	Study of	A) Polypetalae:	31/08/18	02	
	Families-I-	1. Ranales – Magnoliaceae,	To		
	Dicotyledons	2. Parietales – Papaveraceae.	20/09/18		
3	(Polypetalae&	3. Malvales- Tiliaceae.		02	
5	Gamopetalae)	4. Geraniales-, Rutaceae.		02	
	: (15L)	B) Gamopetalae:		02	
		1. Rubiales – Rubiaceae,.			
		2. Asterales – Asteraceae.		02	
		3. Personales- ,Bignoniaceae.			
		4. Lamiales – Verbenaceae			
		(Systematic position, general			
		characters, distinguishing features,		02	
	Credit - IV:	floral formula, floral diagram and			
	Study of	economic importance).		02	
	Families-II:	A) Apetalae:	23/09/18	02	
4	Dicotyledons	1.Curvembryae – Amarantaceae.	То		
4	(Apetalae)&	2. Micrombryae – Piperaceae.	То		
	Monocoteyled	3. Unisexuales –Casuarinaceae.	31/10/18		
	ons: (15L)	B) Monocotyledonae:		02	
		1.Microspermae- Orchidaceae.			
		2. Epigynae – Scitamineae.		02	
		3. Coronarieae –Commelinaceae.		05	
		4. Nudiflorae – Typhaceae.			
		5. Cyperales - Cyperaceae .			

Rajarshi Shahu Mahavidyalaya, Latur

(Autonomous) Structured Work Plan for Teaching (Dec – 2018 to March. 2019)

Details of Classes to be taught

Sr. No.	Class	Name of Professor	Subject	Paper
1	B.Sc.III	Prof. S. N. Shinde	Botany	Plant Pathology II
2	M.Sc.II	1101. 5. 11. Similar	Dotany	Plant Pathology II

Summary of Lesson Plan:

Sr. No.	Subject	Unit and Chapter to be covered	Date	No. of Lectures	Academic activities to be organized	No. of Test / Assignme nt with topic and date
1	Credit I:	1. History: Beginning of modern plant	01/12/18			
	Introduction	pathology; Contribution of Anton de	То	02		
	to Plant Pathology	Dary, Deficulti Trevost, J.C. Kulli,	02/01/19	02		
	(15L)	Paul Neergaard, P.H.		02		
		Geregory.Historyof the development				
		of plant pathology in India; plant disease clinics.		02		
		2. Disease inciting agents: i) Biotic		03		
		agents: Bacteria, viruses, fungi,				
		Mycoplasma, nematodes. ii) Abiotic				
		agents: Air pollution; mineral				
		elements, temperature, toxic effects of		02		
		improperly used chemicals.				
		3. Symptoms of plant diseases:				
		Symptoms caused by Fungi, Bacteria,				
		Viruses, Mycoplasma and Nematodes.				
		4. Dissemination of plant pathogen:		03		
		Dissemination by Air, Water, Buds,				
		Insects, Man and transmission of plant viruses.				
		5. Economic importance of plant		01		

		diseases.			
2	Credit- II:	1. Epidemiology and forms of	05/01/19		
	Epidemiolog y and	epidemics:	То		
	forecasting	i) Compound interest diseases, simple	27/01/19		
	of plant	interest, diseases slow and rapid		02	
	diseases	epiphytotics.		02	
	(15L)	ii) Essential conditions of epidemics,		02	
		decline of epidemics.		02	
		iii)Disease measurement, disease			
		severity, analysis of epidemics.		02	
		2.Disease assessment and forecasting.		02	
		3. Pathogenesis: Penetration and entry			
		by plant pathogen; Pre-penetration;			
		Entry through natural opening; Direct			
		penetration; Entry through wounds,			
		root hairs and buds.		02	
		4. Survivals of plant pathogen.			
		5. Effects of infection on the host:			
		i) Tissue disintegration.			
		ii) Effect on growth of host.			
		iii) Effect on reproduction		03	
		iv) Effect on uptake and translocation of water and nutrients		03	
		v) Effect on respiration of host.			
3	Credit- III:	Symptomology, causal organism,	01/02/19		
	Diseases of	etiology and control measures of:-	То		
	crop plants I (15L)	1) Stem rust of Wheat.	02/03/19	02	
	(13L)	2) Slow decline of Citrus			
		3) Head smut of Jowar.		02	
		4) Wilt of Arhar.		02	
		5)Leaf spot of Potato			
		(Cercospora).		02	
		6) Tikka disease of Groundnut.		02	
		7) Citrus Canker		02	
		8) Broom rape (Orobranche) -		02	
		Tomato		02	
		9) Gram Blight Disease.		02 02	
		10) Yellow Vein Mosaic of			
		Bhendi.			

4	Credit IV:	Symptomology, causal organism,	08/03/19	
	Diseases of	etiology and control measures of:-	То	02
	crop plants II (15L)	1) Leaf curl of Chilly.	30/03/19	02
	(13L)	2) Anthracnose of Mango.		02
		3) Wilt of Sugarcane.		
		4) Black rot of Crucifers.		02
		5) Fruit rot of Cucurbits.		02
		6) Gummosis of sugarcane.		
		7) Giant mistletoes		02
		8) Rust of Pea.		02
		9) Whip Smut of Sugarcane.		02 02
		10) White Rust of Mustard.		02

Head

Sr. No.	Subject	Unit and Chapter to be covered	Date	No. of Lectures	Academic activities to be organized	No. of Test / Assignm ent with topic and date
1	Unit-I: Aerobiology And Seed Pathology (10 L)	 Aerobiology- Definition, scope and importance Disease forecasting. Seed pathology-Definition, Seed borne pathogens (external and internal). Detection of seed borne pathogens by blotter paper and agar plate methods. Seed treatment (hot water, solar, chemical,) Seed certification 	01/07/1 To 27/07/19	03 02 05		
2	Unit-Ii: Plant Diseases-I (12 L)	Symptoms, causal organisms, disease cycle and control measures of 1.Tikka disease ofgroundnut, 2.White rust of Mustard, 3.Loose smut of Meat, 4.Rust of Jowar, 5.Grain smut of Jowar, 6 .Leaf curl of tomato	01/07/19 To 27/07/19	02 02 02 02 02 02 02 02		
3	Unit-Iii: Plant Diseases-Ii (131)	Symptoms, causal organisms, disease cycle and control measures of 1.Downy mildew of Grape 2.Stem rust of Wheat 3.Wilt of Tur 4. Late blight of Potato 5.Powdery mildew of pea 6.Papaya mosaic 7.Root Knot of vegetables	01/07/19 To 27/07/19	02 02 02 02 02 02 02 02 01		
4	Unit –Iv: Defence Mechanism And Plant	 Structural defense (pre existing and post infectional) Biochemical defense- pre existing and postinfectional 	01/07/19 To 27/07/19	02 02		

B.Sc.III

Disease	(phytoalexins)		
Management	3. Exclusion and eradication,	02	
(10 L)	4. Chemical control-General	02	
	account of Sulphur, Copper,		
	systemic fungicides and		
	antibiotics,		
	5. Integrated pest management	01	
	6. Biological control	01	