DEPARTMENT OF BOTTANY

ABHEDANANDA MAHAVIDYALAYA, SAINTHIA, BIRBHUM, WB

Academic plan (suggestive) (2018-19) SEM 2 (Hons). w. e. f - 17.01.2018

SEMESTERS: 2nd (TWO)

COURSES	CORE COURSE III (CC III)	Mycology and Phytopathology					
COURSES	CORE COURSE IV	Morphology & Anatomy of Angiosperms					
	(CC IV)						
TOTAL MARKS	75	Theory-40	Practical-20	Internal -15			
TOTAL CREDIT	06	Theory-4	Practical-2				
TOTAL NO OF LECTURES	60+30	60	30				
OBJECTIVES	To have a tentative course of action well in advance through the said academic plan to be able to ✓ Execute the new CBCS ✓ Finish syllabus and conduct evaluations on time to the satisfaction of both the student and teacher ✓ Integrate the practical with theory syllabus						
EVALUATION METHOD:	C1 -5 Marks of the total mark	C1 -5 Marks of the total marks (Class test/Assignment)					
	C2-5 Marks of the total marks (Class test/Assignment) Attendance						
	C3-40 marks [(10x2)+(5x2)+(2x5)] Semester 1 Final (5 Marks) Examination by University						

C1 CLASSES	8 th week from the beginning point, completed 1/3 rd of the total course of the syllabus around 3 rd week of March 2018
C2 CLASSES	16 th week from the 3 rd week of January, 2/3 rd of the syllabus completed, around 3 rd week of May 2018.
C3 CLASSES	21st to 23rd week full syllabus completed around 3rd week of Jun 2018

CORE COURSE III (CCIII) Mycology and Phytopathology							
1 st -8 th week	THEORY:-	THEORY:-	PRACTICAL:-				
	Unit 1: Introduction to true fungi	Unit 9: Phytopathology	Fungi				
	General characteristics; Affinities with plants and animals; Thallus organization; Cell wall	Terms and concepts; General symptoms; Geographical distribution of diseases;	Study of the following genera and their identification:				
	composition; Nutrition; Classification (Alexopoulos & Mims, 1979).	Symptomology; Koch's Postulate; Host-Pathogen	Rhizopus,				
	Unit 2: Chytridiomycota and	relationships;	Talaromvces,				
	Zygomycota Characteristic features;	Disease cycle and environmental relation;	Alterneria,				
	Thallus organisation; Life cycle with reference to	Types of diseases, host	Plant Pathology				
	Synchytrium and Rhizopus Unit 3:	defense mechanism;	Identification of diseases prescribed in the				
	Ascomycota General characteristics, sexual	prevention and control of plant diseases (biological &	theoretical syllabus.				
	reproduction and development of ascus and ascospores, types	chemical), and role of Quarantine.	Study of the following				
	of ascocarp; Phenomenon of	Bacterial diseases-Citrus	diseases:				
	Heterokaryosis and parasexuality in asexual	canker	White rust, Rust of				
	members; Life cycle of Saccharomyces,	Bacterial blight of rice.	wheat/ <i>Justicia.</i> ,				
	Talaromyces, Neurospora and		Loose smut of wheat				
	Ascobolus.						
9 th -16 th week	Unit 4: Basidiomycota General characteristics;	Viral diseases-Tobacco Mosaic virus.	Fungi				
	Phenomenon Of	11.00010	Study of the following genera and their				

	dikaryotization, development of basidia and basidiospores	Fungal diseases & Control –	Identification:
	and basidiocarp, Life cycle	Late blight of potato.	Ascobolus,
	of Puccinia (Physiological Specialization)	Ergot of rye;	Agaricus
	and Agaricus, Bioluminescence, FairyRings	Black stem rust of wheat,	Polypoms.
	and Mushroom Cultivation.	Loose smut of wheat,	Plant Pathology
	Unit 5:		Herbarium specimens of bacterial diseases; Citrus Canker;
	Allied Fungi General characteristics;		Angular leaf spot of cotton,
	Status of Slime molds, Occurrence; Types of plasmodia.		Viraldiseases: TMV, Vein clearing,
	Unit 6:		Fungal diseases:
	Oomycota General characteristics; Life cycle		Early & Late blight of potato, Black stem rust of wheat
	of <i>Phytophthora</i> and		and White rust of crucifers.
	Albugo.		
17 th -22 nd week	Unit 7: Symbiotic associations Lichen - Occurrence; General	Covered smut of wheat,	Fungi
	characteristics; Range of thallus organization; Nature of associations of algal and fungal partners; Reproduction; Mycorrhiza-	White rust of crucifers.	Identification of all the macroscopic and microscopic genera
	Ectomycorrhiza, Endomycorrhiza with special reference to VAM and their significance.		included in the theoretical syllabus.
	Unit 8: Applied Mycology		Plant Pathology
	Role of fungi in biotechnology; Application of fungi in food industry (Flavour & texture,		Mycorrhizae-Ecto and Endo mycorrhizae (photographs only)
	Fermentation, Baking, Organic acids, Enzymes, Mycoproteins); Secondary metabolites (Pharmaceutical		(photographs omy)

23 rd -24 th	preparations); Agriculture (Biofertilizers); Mycotoxins; Biological control (Mycofungicides, Mycoherbicides, Mycoinsecticides, Myconematicides). Special classes If needed,	Special classes If needed,	Practice If needed
	to boost up the students for final examination	to boost up the students for final examination	
Last week	Prepared the students for	examination ethics, techn	iques and boost up the
	mental stability.		
Suggested	Fungi 1. Text book of botany. Vol. 2. College Botany Vol II 3. Studies in Botany Vol I	ol 1. New central book agency	
books	Plant pathology 1. Text book of botany. Vol. College Botany Vol II 3. Studies in Botany Vol I	ol 1. New central book agency	

CORE COURSE IV (CC IV)--- Morphology & Anatomy of Angiosperms

1st-8th week	THEORY:-	THEORY:-	PRACTICAL:-
1 -0 WCCK			1. Study of anatomical
	Morphology of	Anatomy of Angiosperms	details through
	Angiosperms	Unit 1:	permanent
	Unit 7:	Introduction and scope of	slides/temporary stain
	Leaves and Inflorescence	Plant Anatomy	mounts/
		Applications in systematics,	macerations/museum
	Leaves-types,	forensics and pharmacognosy.	specimens with the help
	phyllotaxy	Unit 2:	of suitable examples.
	and	Structure and Development	2. Study of the
	modifications;	of Plant Body	secondary structures of
	Inflorescence-Types	Internal organization of plant	stem of the following
	and	body: The three tissue systems,	genera: Bignonia,
	evolution	types of cells and tissues;	Dracaena (Cordyline),
		Development of	Boerhaavia and
	Unit 8:	plant body: a brief account.	Strychnos.
	Flower, Fruit and Seed	Unit 3:	
		Tissues	
	Types of flower;	Classification of tissues;	
	Aestivation,	Simple and complex tissues (no	
		phylogeny); cyto-	
		differentiation of tracheary	
		elements and sieve elements;	
		Cell wall and it's secondary	
		growth; Pits and	
		plasmodesmata; Ergastic	

		substances. Hydathodes,	
		cavities, lithocysts and	
		laticifers.	
9 th -16 th week		Unit 4:	V-1 T1
	placentation - types	Apical meristems	Xylem: Tracheary
	and evolution.	Evolution of concept of organization of shoot apex	elements-tracheids, vessel elements;
	evolution.	(Apical cell theory, Histogen	thickenings; perforation
	Floral formula	theory, Tunica Coipus	plates;xylem fibres.
	&	theory, continuing meristematic	(from permanent slides)
	floral diagram;	residue, cytohistological	(<i>p</i>)
		zonation); Types of vascular	Phloem: Sieve tubes-
	Adhesion-Cohesion	bundles; Structural	sieve plates; companion
	of	differences of dicot and	cells; phloem fibres,
	floral parts,	monocot stem, root & leaf,	(from permanent slides)
		Kranz anatomy. Organization of	
	micro and mega gameto-	root apex (Apical	Epidermal system: cell
	and .	cell theory, Histogen theory,	types, stomata types;
	sporogenesis;	Korper-Kappe theory);	trichomes: non- glandular and glandular,
	omhryosa <i>a</i>	Quiescent centre; Endodermis, exodermis and origin of lateral	lenticels.
	embryosac,	root.	ienticeis.
	Fruits -types,	Unit 5:	
	Traits types,	Vascular Cambium and	
	Fruit & Seed dispersal.	Wood	
	1	Structure, function and seasonal	
		activity of cambium; Secondary	
		growth in root and stem with	
		special	
		reference to Bignonia,	
		Dracaena (Cordvline),	
		Boerhaavia and Strychnos.	Root: monocot, dicot,
17 th -22 nd week	Embryosac,	Types of rays and axial	secondary growth (from
	Zinory osae,	parenchyma; Sapwood and	permanent slides).
	Fruits types,	heartwood; Ring and diffuse	,
		porous wood; Early and late	Stem: monocot, dicot -
	Fruit & Seed dispersal.	wood, tyloses;	primary and secondary
		Dendrochronology.	growth; periderm (from
		Development and composition	permanent slides);
		of periderm; General account of	T C D'CC
		Rhytidome and lenticels.	Leaf: Different
		Unit 6:	variations; C4 leaves (Kranz anatomy).
		Adaptive and Protective Systems	(Kranz anatomy).
		Epidermal tissue system,	Cystolith, lithocysts and
		cuticle, epicuticular waxes,	Raphides.
		trichomes (uni-and	
		multicellular,	Types of inflorescence,
		Glandular and nonglandular,	placentation and fruits.
		two examples of each), stomata	praconation and mans.
		(classification),	
23 rd -24 th	Special classes If needed,	Special classes If needed, to	Special classes If
23'"-24"	to boost up the students for	boost up the students for	needed, to boost up
	final examination	final examination	the students for final
	1 IIII CAMIIIIIUUOII	I I I I I I I I I I I I I I I I I I I	The Stadents for Initial

	examination
Last week	Prepared the students for examination ethics, techniques and boost up the
	mental stability.
Suggested	Morphology of Angiosperms
books	1. Text book of botany. Vol II. New central book agency
	2. Plant Taxonomy. O.P.Sharma. Tata McGraw-Hill.
	3. Studies in Botany
	Anatomy of Angiosperms
	1. Evert, R.F. (2006). Esau's Plant Anatomy: Meristems, Cells, and Tissues of
	the Plant Body: Their Structure, Function and Development. John Wiley and
	Sons, Inc.
	2. Text book of botany. Vol II. New central book agency
	3. Studies in Botany

WEEK WISE ACADEMIC PLAN FOR THEORY CBCS HONS SYLLABUS

					CCIV		
WEEKS	DATE	CC III (Unit 1;2;3;4;5;6;7;8) DB	CCIII (Unit 9) DB	DATE	CCIV (Unit 1;2;3;4;5;6) AB	CCIV (Unit 7;8) KKM	Remarks
1	17.01.2018	Mycology Unit 1: Introduction to true fungi	Unit 9: Phytopathology Introduction	17.01.2018	Anatomy of Angiosperms Unit 1: Introduction and scope of Plant Anatomy Applications in systematics, forensics and pharmacognosy	Morphology of Angiosperms Unit 7: Introduction	
2		General characteristics; Affinities with plants and animals; Thallus organization; Cell wall composition; Nutrition;	Terms and concepts; General symptoms; Geographical distribution of diseases;		.Unit 2: Structure and Development of Plant Body Internal organization of plant body: The three tissue systems, types of cells and tissues;	Leaves Leaves-types, phyllotaxy ,	
3		Classification (Alexopoulos & Mims, 1979).	Symptomology; Koch's Postulate; Host- Pathogen relationships; Disease cycle and environmental relation;		Development of plant body: a brief account.	Inflorescence modifications; Inflorescence Types	
4		Unit 2: Chytridiomycota and Zygomycota Characteristic features; Thallus organisation; Life cycle with reference to Synchytrium and Rhizopus	Types of diseases, host defense mechanism;		Unit 3: Tissues Classification of tissues; Simple and complex tissues (no phylogeny); cyto-	Inflorescence evolution	
5		Unit 3: Ascomycota General characteristics, sexual reproduction and development of ascus and ascospores,	prevention and control of plant diseases (biological & chemical),		differentiation of tracheary elements and sieve elements;	Unit 8: Flower, Types of flower	
6		. types of ascocarp; Phenomenon of Heterokaryosis and parasexuality in	and role of Quarantine.		Cell wall and it's secondary growth;	Aestivation Fruit	

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Saccharomyces, Talaromyces, Neurospora and Canker Pits and plasmodesmata; Ergastic substances. Bacterial blight of rice. Ilydathodes, canking the substances and laticifers Pruits types			asexual members; Life					
Talaromyces, Neurospora and diseases-Citrus canker Pits and plasmodesmata; Ergastic substances.			•					
Neurospora and diseases-Citrus canker plasmodesmata; Ergastic substances.				D		701. 1	The transfer	
Substances Hydathodes Fruits types	7			diseases-Citrus		plasmodesmata;	Fruits types	
Same						substances.		
9 27.03.18 Exam CC III 27.03.18 Exam CC IV 2.03.18 Exam CC IV 2.03.18 Dark CC IV 2.03.18 Exam CC IV 2.03.18	8		Ascobolus			cavities, lithocysts	Fruits types	
11 Basidiomycota General characteristics; Phenomenon Of dikaryotization, development of basidia and basidiospores and basidiospores and basidiospores Life cycle of Puccinia (Physiological Specialization) and Agaricus, Bioluminescence, FairyRings General characteristics; Status of Slime molds, Occurrence; Types of plasmodia. Late blight of plasmodia Compress of plasmodia Compress of plasmodia Compress of plasmodia Compress of physiological Specialization of plasmodia Compress of plasmodia Compress of plasmodia Compress of physiological Specialization of plasmodia Compress of plasmodia Compress of plasmodia Compress of plasmodia Compress of physiological Specialization of plasmodia Compress of physiological Specialization of plasmodia Compress of plasm	9	27.03.18	Exam CC III	Exam CC III	27.03.18		Exam CC IV	
Tobacco Mosaic General Characteristics; Phenomenon Of Gikaryotization, development of basidia and basidiocarp,	10		Marks deposit	Marks deposit		Marks deposit	Marks deposit	20.06.18
Tobacco Mosaic General Characteristics; Phenomenon Of Gikaryotization, development of basidia and basidiocarp,			Unit 4:	Viral diseases-		Unit 4:	placentation -	
characteristics; Phenomenon Of dikaryotization, development of basidia and basidiosopres and basidiocarp, Life cycle of Puccinia (Physiological Specialization) and Agaricus, Bioluminescence, FairyRings Mushroom Cultivation, Unit 5: Allied Fungi General characteristics; Status of Slime molds, Occurrence; Types of plasmodia. Unit 6: Oomycota General characteristics; Life cycle Unit 6: Oomycota General characteristics; Life cycle Of Plytophythora Black stem rust Of Weat, Vascular Cambium concept of organization of shoot apex (Apical cell theory, Histogen theory, Floral formula and Adhesion- Cohesion root & leaf, Kranz anatomy. Organization of floral diagram Adhesion- Cohesion of floral parts, devolution. Vascular Cambium evolution. evolution. evolution. evolution. Ploral formula and monocot stem, floral diagram Adhesion- Cohesion of floral parts, devolution. Floral formula Adhesion- Cohesion of floral parts, Adhesion- Cohesion of gloral parts, Histogen theory, Histogen theory, Comperchappe theory); Unit 6: Oomycota General characteristics; Life cycle Of Black stem rust of wheat, Vascular Cambium vascular Cambium vascular Cambium	11						-	
characteristics; Phenomenon Of dikaryotization, development of basidia and basidiospores and basidiocarp, Life cycle Of Puccinia (Physiological Specialization) and Agaricus, Bioluminescence, FairyRings Mushroom Cultivation. Unit 5: Allied Fungi General characteristics; Status of Slime molds, Occurrence; Types of plasmodia. Unit 6: Oomycota General Cell theory, Histogen theory, Tunica Coipus theory, continuing meristematic residue, cytohistological zonation); Types of vascular bundles; Structural differences of dicot and monocot stem, floral diagram Floral formula & floral diagram Adhesion- Cohesion of floral parts, Histogen theory, Korper-Kappe theory); Korper-Kappe theory); Courrence; Types of plasmodia. Unit 6: Oomycota General Characteristics; Life cycle Of Black stem rust Of Phytophthora Of Wheat, Vascular Cambium vascular Cambium vascular Cambium pagametogenesis			General	virus.		Evolution of	placentation	
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basidiospores and basidiocarp, Life cycle of Puccinia (Physiological Specialization) and Agaricus, Bioluminescence, FairyRings Mushroom Cultivation. Unit 5: Allied Fungi General characteristics; Status of Slime molds, Occurrence; Types of plasmodia. Unit 6: Oomycota General characteristics; Life cycle of Plytophthora Organization Black stem rust of wheat, Westland diseases & Control Types of vascular bundles; Structural differences of dicot and monocot stem, Toot & leaf, Kranz anatomy. Organization of root apex (Apical cell theory, Histogen theory, Korper-Kappe theoryy); Quiescent centre; Endodermis, exodermis and origin of lateral root. Unit 5: Messland Types of vascular bundles; Structural differences of dicot and monocot stem, Adhesion- Cohesion of floral parts, imicro sporogenesis			of			Tunica Coipus		
12			basidia and			theory, continuing		
Life cycle of Puccinia (Physiological Specialization) and Agaricus, Bioluminescence, FairyRings Mushroom Cultivation. Unit 5: Allied Fungi General characteristics; Status of Slime molds, Occurrence; Types of plasmodia. Unit 6: Oomycota General characteristics; Life cycle of Oomycota General characteristics; Life cycle of Puccinia (Physiological Specialization) and Agaricus, Bioluminescence, FairyRings Late blight of potato. potato. root & leaf, Kranz anatomy. Organization of root apex (Apical cell theory, Histogen theory, Korper-Kappe theory); Korper-Kappe theory); Korper-Kappe theory); Fund of floral parts, of floral parts, of floral parts, unit 6: Oomycota General characteristics; Life cycle of Phytophthora of Black stem rust of wheat, Vascular Cambium Vascular Structural differences of dicct and monocot stem, Floral formula & floral diagram Floral formula Adhesion- Cohesion of floral parts, floral parts, floral diagram anatomy. Organization of floral parts, floral formula & floral diagram Adhesion- Cohesion of floral parts, imicro sporogenesis vascular Cambium			basidiospores			meristematic		
Life cycle of Puccinia (Physiological Specialization) and Agaricus, Bioluminescence, FairyRings Mushroom Cultivation. Unit 5: Allied Fungi General characteristics; Status of Slime molds, Occurrence; Types of Plasmodia. Unit 6: Oomycota General characteristics; Life cycle of Phytophthora Pungal diseases & Control - Fungal diseases & Control - Types of vascular bundles; Structural differences of dicot and monocot stem, Floral formula & floral diagram Addhesion- Cohesion of root apex (Apical cell theory, Histogen theory, Korper-Kappe theory); Quiescent centre; Endodermis, exodermis and origin of lateral root. Unit 5: Phytophthora of Black stem rust of wheat, Vascular Cambium Types of vascular Types of vascular bundles; Structural differences of dicot and monocot stem, Floral formula & floral diagram Addhesion- Cohesion of floral parts, floral parts, floral parts, floral parts, floral parts, floral formula & floral diagram Addhesion- Cohesion of general cell theory, Histogen theory, Korper-Kappe theory); floral parts, floral formula & floral diagram Addhesion- Cohesion of general cell theory, Histogen theory, Korper-Kappe theory); floral parts, floral formula and monocot stem, floral diagram Addhesion- Cohesion of general cell theory, Histogen theory, Korper-Kappe theory); floral parts, floral diagram Addhesion- Cohesion of general cell theory, Histogen theory, Korper-Kappe theory); floral parts, floral diagram Addhesion- Cohesion of general characteristics; Life yellow Secondary Addhesion- Cohesion of general characteristics anatomy. Organization of general charac			and			residue,		
Life cycle of Puccinia (Physiological Specialization) and Agaricus, Bioluminescence, FairyRings Mushroom Cultivation. Unit 5: Allied Fungi General characteristics; Status of Slime molds, Occurrence; Types of plasmodia. Unit 6: Oomycota General Characteristics; Life cycle Of Phytophthora Of Phytophthora Floral formula & floral diagram Floral diagram Floral formula & Adhesion- Cohesion of root apex (Apical cell theory, Histogen theory, Korper-Kappe theory); Quiescent centre; Endodermis, exodermis and origin of lateral root. Unit 5: Nature of Phytophthora Of wheat, Vascular Cambium Floral formula & Adhesion- Cohesion of floral parts, Floral formula & Adhesion- Cohesion of Goension of Goension of floral parts, Floral formula & Adhesion- Cohesion of Goension of floral parts, Floral formula & Adhesion- Cohesion of Goension of floral parts, Floral formula & Agaricus Adhesion- Cohesion of Goension of floral parts, Floral formula Agaricus Aghesion- Cohesion of Floral diagram Floral diagram Floral diagram Floral diagram Floral diagram Adhesion- Cohesion of Goension of floral parts, Floral formula Agaricus Aghesion- Cohesion of Floral diagram Floral diagram Floral diagram Floral diagram Floral diagram Floral formula Agaricus Aghesion- Cohesion of Floral diagram Floral formula Agaricus Aghesion- Cohesion of Goension of Floral diagram Floral formula Agaricus Aghesion- Cohesion of Goension of Floral formula Agaricus Aghesion- Cohesion of Goension of Floral formula Agaricus Aghesion- Cohesion of Goension of Floral formula Agaricus Aghesion- Cohesion of Floral formula Agaricus Adhesion- Cohesion of Floral formula Agaricus Floral formula Floral formula Floral formula Floral formula			basidiocarp,			cytohistological		
13			1			zonation);		
Puccinia (Physiological Specialization) and Agaricus, Bioluminescence, FairyRings			Life cycle	Fungal diseases		Types of vascular		
(Physiological Specialization) and Agaricus, Bioluminescence, FairyRings Mushroom Cultivation. Unit 5: Allied Fungi General characteristics; Status of Slime molds, Occurrence; Types of plasmodia. 14 Unit 6: Oomycota General Ceneral Characteristics; Life cycle Of Black stem rust Of wheat, And monocot stem, floral diagram **Cotte leaf, Kranz anatomy. Organization of Cohesion root apex (Apical cell theory, Histogen theory, Korper-Kappe theory); Quiescent centre; Endodermis, exodermis and origin of lateral root. **Methodal in a provide of the plant of the	12		of	& Control -		bundles; Structural		
Specialization) and Agaricus, Bioluminescence, FairyRings Mushroom Cultivation. Unit 5: Allied Fungi General characteristics; Status of Slime molds, Occurrence; Types of plasmodia. Unit 6: Oomycota General General Characteristics; Life cycle Of Black stem rust Orot & leaf, Kranz anatomy. Adhesion- Cohesion root apex (Apical cell theory, Histogen theory, Korper-Kappe theory); Quiescent centre; Endodermis, exodermis and origin of lateral root. Unit 5: mega gametogenesis			Puccinia			differences of dicot		
and Agaricus, Bioluminescence, FairyRings Mushroom Cultivation. Unit 5: Allied Fungi General characteristics; I composed plasmodia. Unit 6: Comycota General Characteristics; Life cycle Black stem rust Of wheat, Bioluminescence, FairyRings root & leaf, Kranz anatomy. Organization of root apex (Apical cell theory, Histogen theory, Korper-Kappe theory); Quiescent centre; Endodermis, exodermis and origin of lateral root. Unit 5: mega gametogenesis			(Physiological			and monocot stem,		
Agaricus, Bioluminescence, FairyRings Mushroom Cultivation. Unit 5: Allied Fungi General characteristics; I cocurrence; Types of plasmodia. Unit 6: Composite General General Characteristics; Life cycle Black stem rust Of wheat, Poot & leaf, Kranz anatomy. Code leaf, Kranz anatomy. Adhesion- Cohesion root apex (Apical cell theory, floral parts, Korper-Kappe theory); Quiescent centre; Endodermis, exodermis and origin of lateral root. Unit 5: mega gametogenesis			Specialization)				floral diagram	
Bioluminescence, FairyRings Mushroom Cultivation. Unit 5: Allied Fungi General characteristics; Status of Slime molds, Occurrence; Types of plasmodia. Unit 6: Oomycota General Characteristics; Life cycle Bioluminescence, FairyRings Late blight of potato. root & leaf, Kranz anatomy. Organization of root apex (Apical cell theory, Histogen theory, Korper-Kappe theory); Quiescent centre; Endodermis, exodermis and origin of lateral root. Unit 5: Phytophthora Black stem rust of wheat, Vascular Cambium gametogenesis			and					
Mushroom Cultivation. Unit 5: Allied Fungi General characteristics; Status of Slime molds, Occurrence; Types of plasmodia. Unit 6: General Characteristics; Life cycle Definition Itale blight of potato. Toot & leaf, Kranz anatomy. Organization of root apex (Apical cell theory, Histogen theory, Korper-Kappe theory); Vorgen: Vorgen: Variety Quiescent centre; Endodermis, micro sporogenesis origin of lateral root. Toot. Unit 5: The phytophthora Mathesion- Cohesion of good of floral parts,			Agaricus,					
Mushroom Cultivation. Unit 5: Allied Fungi General characteristics; Status of Slime molds, Occurrence; Types of plasmodia. Unit 6: General General Cunit 6: Oomycota General Characteristics; General Characteristics; Status of Slime molds, Occurrence; Types of plasmodia. Unit 6: Oomycota General Characteristics; General Characteristics; General Characteristics; Complete theory, Couiescent centre; Endodermis, exodermis and origin of lateral root. Of Phytophthora Black stem rust of wheat, Vascular Cambium root & leaf, Kranz anatomy. Organization of root apex (Apical cell theory, floral parts, fl			Bioluminescence,					
Cultivation. Unit 5: Allied Fungi General characteristics; Status of Slime molds, Occurrence; Types of plasmodia. Unit 6: Oomycota General Characteristics; Life cycle Of Black stem rust Of wheat, Phytophthora Adhesion- Cohesion of root apex (Apical cell theory, Korper-Kappe theory); Quiescent centre; Endodermis, exodermis and origin of lateral root. Unit 5: mega gametogenesis								
Unit 5: Allied Fungi General characteristics; Status of Slime molds, Occurrence; Types of plasmodia. Unit 6: General Characteristics; Sergot of rye; Ouiescent centre; Endodermis, exodermis and origin of lateral root. Of Black stem rust of wheat, Vascular Cambium Organization of root apex (Apical cell theory, floral parts, Floral parts, Ouiescent centre; Endodermis, exodermis and origin of lateral root. Unit 5: Mega gametogenesis			Mushroom	Late blight of		root & leaf, Kranz		
Allied Fungi General characteristics; Status of Slime molds, Occurrence; Types of plasmodia. Unit 6: General	13		Cultivation.	potato.		anatomy.	Adhesion-	
General characteristics; Status of Slime molds, Occurrence; Types of plasmodia. Unit 6: General Gener			Unit 5:			Organization of		
Status of Slime molds, Occurrence; Types of plasmodia. Unit 6: Comycota General characteristics; Life cycle Of Phytophthora Status of Slime molds, Occurrence; Types of plasmodia. Histogen theory, Korper-Kappe theory); Quiescent centre; Endodermis, exodermis and origin of lateral root. Unit 5: mega gametogenesis							of	
Occurrence; Types of plasmodia. Unit 6: Comycota General Characteristics; Life cycle Of Phytophthora Occurrence; Types of plasmodia. Ergot of rye; Cuiescent centre; Endodermis, exodermis and origin of lateral root. Unit 5: Phytophthora Occurrence; Types of theory); Quiescent centre; Endodermis, exodermis and origin of lateral root. Unit 5: yascular Cambium gametogenesis							floral parts,	
plasmodia. Unit 6: Comycota General characteristics; Life cycle Of Phytophthora Discreption Black stem rust Of wheat, Discreption Theory); Quiescent centre; Endodermis, exodermis and origin of lateral root. Unit 5: Wascular Cambium gametogenesis								
Unit 6: Ergot of rye; Oomycota General characteristics; Life cycle Of Phytophthora Ergot of rye; Endodermis, exodermis and origin of lateral root. Unit 5: Phytophthora Of wheat, Vascular Cambium Quiescent centre; Endodermis, exodermis and origin of lateral root. Unit 5: yascular Cambium gametogenesis			. 51					
Oomycota General characteristics; Life cycle Of Phytophthora Oomycota General characteristics; Black stem rust Of wheat, Sendodermis, exodermis and origin of lateral root. Unit 5: Wascular Cambium gametogenesis								
General exodermis and origin of lateral root. Of Black stem rust Phytophthora of wheat, Of Wheat, Of Wascular Cambium gametogenesis				Ergot of rye;		_		
characteristics; Life cycle of Black stem rust Phytophthora of wheat, origin of lateral root. Unit 5: mega yametogenesis	14		•					
Life cycle root. of Black stem rust Phytophthora of wheat, Vascular Cambium gametogenesis							sporogenesis	
of Black stem rust Unit 5: mega Yascular Cambium gametogenesis								
15 Phytophthora of wheat, Vascular Cambium gametogenesis			Life cycle			root.		
15 Phytophthora of wheat, Vascular Cambium gametogenesis			of	Black stem rust		Unit 5:	mega	
	15							
and and Wood embryosac						and Wood	embryosac	
Structure, function								
and seasonal								
activity of								

16 17 18	12.05.18	Albugo. Exam CC1 Marks deposit	Loose smut of wheat, Exam CC1 Marks deposit	12.05.18	cambium; Secondary growth in root and stem with special reference to Bignonia, Dracaena (Cordvline), Exam CC2 Marks deposit	Fruit & Seed dispersal. Exam CC2 Marks deposit	20.06.18
19		Unit 7: Symbiotic associations Lichen - Occurrence; General characteristics; Range of thallus organization; Nature of associations of algal and fungal partners; Reproduction; Mycorrhiza- Ectomycorrhiza, Endomycorrhiza with special reference to VAM and their significance.	Covered smut of wheat,		Boerhaavia and Strychnos. Types of rays and axial parenchyma; Sapwood and heartwood;	mega gametogenesis embryosac	
20		Unit 8: Applied Mycology Role of fungi in biotechnology; Application of fungi in food industry (Flavour & texture, Fermentation, Baking, Organic acids, Enzymes, Mycoproteins);	White rust of crucifers		Ring and diffuse porous wood; Early and late wood, tyloses; Dendrochronology.	mega gametogenesis embryosac	
21		Secondary metabolites (Pharmaceutical preparations); Agriculture (Biofertilizers);	Special classes If needed, to boost up the students for final examination		Development and composition of periderm; General account of Rhytidome and lenticels.	Special classes If needed, to boost up the students for final examination	
22		Mycotoxins; Biological control (Mycofungicides, Mycoherbicides, Mycoinsecticides, Myconematicides).	Special classes If needed, to boost up the students for final examination		Unit 6: Adaptive and Protective Systems Epidermal tissue system, cuticle, epicuticular waxes, trichomes (uni-and	Special classes If needed, to boost up the students for final examination	

			multicellular,		
23	Special classes If needed, to boost up the students for final examination	Special classes If needed, to boost up the students for final examination	у	Special classes If needed, to boost up the students for final examination	
24	Final Exam	Final Exam	Final Exam	Final Exam	

WEEK WISE ACADEMIC PLAN FOR PRACTICAL CBCS HONS SYLLABUS

WEEKS	DATE	CC III (Unit	CCIII (Unit	DATE	CCIV	CCIV (Unit	Remarks
		1;2;3;4;5;6;7;8)	9) DB		(Unit 1;2;3;4;5;6)	7;8) KKM	
		DB			AB		
		FUNGI	PLANT		Anatomy of	Types of	
1		Study of the	PATHOLOGY		Angiosperms	inflorescence,	
		following	Identification		Study of anatomical	placentation	
		genera and their	of diseases		details through	and fruits.	
		identification:	prescribed in		permanent		
		Rhizopus,	the theoretical		slides/temporary		
			syllabus.		stain mounts/		
					macerations/museum		
					specimens with the		
					help of suitable		
					examples.		
		Study of the	Identification		Study of anatomical	Types of	
2		following	of diseases		details through	inflorescence,	
		genera and their	prescribed in		permanent	placentation	
		identification:	the theoretical		slides/temporary	and fruits.	
		Talaromvces,	syllabus.		stain mounts/		
					macerations/museum		
					specimens with the		
					help of suitable		
					examples.		
		Study of the	Study of the		Study of anatomical	Types of	
3		following	following		details through	inflorescence,	
		genera and their	diseases:		permanent	placentation	
		identification:	White rust,		slides/temporary	and fruits.	
		Alterneria,	Rust of		stain mounts/		
			wheat/Justicia,		macerations/museum		
					specimens with the		
					help of suitable		
		C. 1 C.1	G. 1 C.1		examples.	TD C	
4		. Study of the	Study of the		Study of anatomical	Types of	
4		following	following		details through	inflorescence,	
		genera and their	diseases: loose		permanent	placentation	
		identification:	smut of wheat.		slides/temporary stain mounts/	and fruits.	
		Ascobolus,			macerations/museum		
					specimens with the		
					help of suitable		
					examples.		
		Study of the	Herbarium		Study of the	Types of	
5		following	specimens of		secondary structures	inflorescence,	
		genera and their	bacterial		of stem of the	placentation	
		identification:	diseases;		following genera:	and fruits.	
		Agaricus and	Citrus Canker;		Bignonia, Dracaena	una mano.	
		- Com totto dila	Angular leaf		(Cordyline),		
			spot of cotton,		Boerhaavia		
		Study of the	Viral		and Strychnos.	Types of	
6		following	diseases:		and buryenious.	inflorescence,	
		genera and their	TMV,			placentation	
		identification:				and fruits.	

	Polypoms.				
	1 oryponis.				
7	practice	Practice	Xylem: Tracheary elements-tracheids, vessel elements; thickenings; perforation plates;xylem fibres. (from permanent slides)	Types of inflorescence, placentation and fruits.	
8	practice	Practice	Xylem: Tracheary elements-tracheids, vessel elements; thickenings; perforation plates;xylem fibres. (from permanent slides)	Types of inflorescence, placentation and fruits.	
9					
10					
11	Identification of all the macroscopic and microscopic genera included in the theoretical syllabus.	Vein clearing, Fungal diseases: Early blight of potato	Phloem: Sieve tubes- sieve plates; companion cells; phloem fibres, (from permanent slides)	Practice	
12	Identification of all the macroscopic and microscopic genera included in the theoretical syllabus.	& Late blight of potato,	Phloem: Sieve tubes- sieve plates; companion cells; phloem fibres, (from permanent slides)	Practice	
13	Identification of all the macroscopic and microscopic genera included in the theoretical syllabus.	Black stem rust of wheat and	Epidermal system: cell types, stomata types; trichomes: non-glandular and glandular, lenticels.	Practice	
14	Identification of all the macroscopic and microscopic genera included in the theoretical syllabus.	White rust of crucifers.	Epidermal system: cell types, stomata types; trichomes: non-glandular and glandular, lenticels.	Practice	

	T.1	ntification of		Doots manage	Practice	
15	lder	all the	Mycorrhizae-	Root: monocot,	Practice	
13	m	acroscopic		dicot, secondary growth (from		
		microscopic	Ecto and Endo	permanent slides).		
		era included	mycorrhizae	permanent sinces).		
	gen	in the				
	tl	heoretical	(photographs			
		syllabus.	only)			
	Ider	ntification of		Root: monocot,	Practice	
16		all the	Mycorrhizae-	dicot, secondary		
	m	acroscopic	Ecto and Endo	growth (from		
	and	microscopic		permanent slides).		
	gen	era included	mycorrhizae			
		in the	(photographs			
		heoretical				
		syllabus.	only)			
17						
17						
18						
				Stem: monocot,	Practice	
19	Prac	tice	Practice	dicot - primary and		
				secondary growth;		
				periderm (from		
				permanent slides);		
20	Door	et e	Desertion	Leaf: Different	Practice	
20	Prac	rtice	Practice	variations; C4 leaves		
				(Kranz anatomy).	Practice	
21	Prac	tice	Practice	Cystolith, lithocysts and Raphides.	Practice	
<i>_</i> 1	Tac	-1100	Tuotico	•	Duo et e	
22	Prac	etice	Practice	Practice	Practice	
<i>LL</i>	Flac	tice	Tactice	n :	D .	
22	D	tion	Descripe	Practice	Practice	
23	Prac		Practice			
		ecial classes	Special classes	Special classes If	Special	
24		needed, to	If needed, to	needed, to boost up	classes If	
		oost up the	boost up the	the students for final	needed, to	
	st	tudents for	students for	examination	boost up the	
		final	final		students for	
	ex	kamination	examination		final	
					examination	