

KONGUNADU ARTS AND SCIENCE COLLEGE (AUTONOMOUS), COIMBATORE - 29.

ACADEMIC PLANNING

Department: Botany

Name of the Teacher: Dr. V. ARAVINDHAN

Year 2021 - 2022

Title of the Paper: and Core Paper - Taxonomy and Biogeobotanics

Subject Code: 20P30307

Semester: ODD / EVEN

Test No. & Period	Topics allotted	No. of hours required for completion	Dates & hrs of handling	Topics not covered, if any	Sig	Sta
I From : 09/08/2021 To : 13/10/2021	<u>Unit-I:</u> - Historical account of the classification of Angiosperms - Systems of classifications - Detailed study of Bertram and Hooker, Bessey, Hutchinson, Cronquist and APG IV and merits and demerits - ICN - history, principles, typification, principles of priority and their limitations - effective and valid publication author citation, retention, choice and rejection of names of hybrids. - Herbium and its potential role in teaching and research	18 hours	18 hours	Nil		
II From : 28/10/2021 To : 24/02/2022	<u>Unit-II</u> - Description and economic importance of the following families - Menispermaceae, Polygalaceae, Caryophyllaceae, Portulacaceae, Oxalidaceae, Tiliaceae, Meliaceae and Vitaceae <u>Unit-IV</u> - Anisobiaceae, Loranthaceae, Orchidaceae, Dioscoreaceae, Commelinaceae, Araceae and Cyperaceae.	18 hours	18 hours	Nil		

KONGUNADU ARTS AND SCIENCE COLLEGE (AUTONOMOUS), COIMBATORE - 29.

ACADEMIC PLANNING

Department: Botany
 Name of the Teacher: DR. V. ARAVINDHAN
 Title of the Paper: ~~Angiosperms and Economic Botany~~ Core Paper - 6, Taxonomy of Botany
 Subject Code: 19UBD506

Year 2024 - 2022

Semester: ODD / EVEN

Test No. & Period	Topics allotted	No. of hours required for completion	Dates & hrs of handling	Topics not covered, if any	Signature	
					Staff	H
I From : 09/08/2024 To : 13/10/2024	Unit - 1: - Aims and objectives of Taxonomy. Systems of classification Natural (Bentham and Hooker), Phylogenetic (Engelmann) and Modern (APG - IV). Merits and Demerits. - Economic Botany - study of botany, cultivation and utilization of the following: Fibre yielding plants (cotton), sugar yielding plant (Sugarcane) and food crops (Cereals), oil bearing plants .	15 hours	15 hours	nil		
II From : 28/10/2024 To : 24/02/2022	Unit - II - Detailed study of the following families with reference to morphology, taxonomy and their economic importance - Solanaceae, Acanthaceae, Verbenaceae, Lamiaceae, Amaranthaceae, Euphorbiaceae, Hydrocharitaceae, Zingiberaceae, Liliaceae, Araceae and Poaceae. Economic Botany - food crops (pulses) - Spices and condiments (pepper and turmeric).	15 hours	15 hours	nil		

KONGUNADU ARTS AND SCIENCE COLLEGE (AUTONOMOUS), COIMBATORE - 29.

ACADEMIC PLANNING

Department: Botany

Name of the Teacher: K. S. VANDHARAJAN

Year 2021 - 2022

Title of the Paper: Biodiversity - I

Subject Code: 21VB0101

Semester: ODD + EVEN

Test No. & Period	Topics allotted	No. of hours required for completion	Dates & hrs of handling	Topics not covered, if any	St
I From : 01.09.2021 To : 20.11.2021	<u>UNIT - IV</u> - Fungi - General characters of the fungi, Outline classification (Alexopoulos and Mims, 1979), detailed study of occurrence, structure reproduction and life cycle of <u>Albugo</u> , <u>Rhizopus</u> , <u>Saccharomyces</u> .	16 h	-	-	2
II From : 29.11.2021 To : 24.12.2021	<u>UNIT - IV</u> - <u>Penicillium</u> , <u>Hyoscyamus</u> . <u>UNIT - V</u> - Importance of fungi - Pathology - Introduction, definition and classification of diseases. Symptoms, causative organisms, and control measures of Tobacco Mosaic viral disease, Bunchy top of Banana, Tiram disease of Groundnut and Citrus canker.	16 h	-	-	2

KONGUNADU ARTS AND SCIENCE COLLEGE (AUTONOMOUS), COIMBATORE - 29.

ACADEMIC PLANNING

Department: BOTANY

Name of the Teacher: K. SOWNDHARARAJAN

Year 2021- 2022

Title of the Paper: Plant Ecology, Phytogeography and Resource Conservation

Subject Code: 19UB0508

Semester: ODD / EVEN

Test No. & Period	Topics allotted	No. of hours required for completion	Dates & hrs of handling	Topics not covered, if any	Signature	
					Staff	I
I From : 09.08.2021 To : 13.10.2021	<u>UNIT-III</u> - Basic structure and functions, <u>Pollution</u> - causes and possible control measures of air, water, soil and noise <u>Pollutions</u> .	8 h	-	-		
II From : 28.10.2021 To : 24.12.2021	<u>UNIT-III</u> - Radioactive <u>Pollutions</u> , <u>Plants</u> - Indicators of <u>Pollution</u> , <u>Disasters</u> Management. <u>UNIT-V</u> - Resource conservation, types of resources, conservation of soil, water, agriculture resources.	8 h	-	-		

KONGUNADU ARTS AND SCIENCE COLLEGE (AUTONOMOUS), COIMBATORE - 29.

ACADEMIC PLANNING

Department: Botany Name of the Teacher: Dr. K. KARSHALKA Year 2021 - 2022
 of the Paper: C.P. 3 - Anatomy and Embryology Subject Code: 20.V.B.0303 Semester: ODD / EVEN

Test No. & Period	Topics allotted	No. of hours required for completion	Dates & hrs of handling	Topics not covered, if any	Signature of	
					Staff	HO
I Date: 9/8/2021	<u>Unit - IV</u> Angiosperm life cycle. Microsporangium: structure and development of anther, wall of microsporangium, Tapetum - structure, types and functions. Pollen morphology - NPC formula, Pollen wall features, pollen kit, Megasporangium: structure types of ovule, ultrastructure of mature embryo sac (Polygamum).	15 Hrs		Nil	<u>K. Karshalka</u>	<u>H. H.</u>
II Date: 28/10/2021	<u>Unit - V</u> Fertilization: Double fertilization. Endosperm: Nuclear, cellular, Helobial, and Ruminant types. Haustorial behaviour of endosperm and function. Embryo: Embryogeny in Dicotyledons (Crucifera type) and Monocotyledons (Caryophyllad type). Polyembryony & Palaeobotany: Classification, types & Applications. Apomixis: types and significance.	15 Hrs		Nil	<u>K. Karshalka</u>	<u>H. H.</u>
III Date: 24/12/2021						

KONGUNADU ARTS AND SCIENCE COLLEGE (AUTONOMOUS), COIMBATORE - 29.

ACADEMIC PLANNING

Department: Botany
C.P.T. - Cytology, Genetics
and Plant Breeding

Name of the Teacher: Dr. K. KARATHI RA

Year 2021-2022

Name of the Paper: Plant Breeding

Subject Code: 19UBD507

Semester: ODD / EVEN

Test No. & Period	Topics allotted	No. of hours required for completion	Dates & hrs of handling	Topics not covered, if any	Signature of	
					Staff	HO
I Date: 09/08/2021 Date: 13/10/2021	<u>Unit - III</u> Genetics - field of genetics, Mendel's experiments, Mendel's law of inheritance, monohybrid & dihybrid cross, Gene interaction - Incomplete dominance, Codominance, Collaborator gene, Epistasis, Complementary genes, Duplicate genes and Lethal genes. <u>Unit - II</u> Cell division - Cell cycle, Amitosis	15 Hrs		Nil	K. Karathi	K. Karathi
II Date: 28/10/2021 Date: 24/12/2021	Mitosis & Meiosis and their significance <u>Unit - IV</u> Multiple alleles, Linkage - Complete and incomplete, Crossing over - mechanism, kinds and controlling factors, Cytoplasmic inheritance in plants - male sterility in maize.	15 Hrs		Nil	K. Karathi	K. Karathi

KONGUNADU ARTS AND SCIENCE COLLEGE (AUTONOMOUS), COIMBATORE - 29.

ACADEMIC PLANNING

Department: Botany

Name of the Teacher: Dr. R. Thirumana Sampandan

Year 2022-2023

Title of the Paper: Biophysics, Biochemistry and Bioinstrumentation

Subject Code: 21PBA41A

Semester: ODD / EVEN

Test No. & Period	Topics allotted	No. of hours required for completion	Dates & hrs of handling	Topics not covered, if any	Signature	
					Staff	HC
I from: 21/02/2022 to: 18/04/2022	<u>Unit-I</u> Electromagnetic radiation - Nature, absorption, absorption spectrum and action spectrum, law of absorption, interaction with matter, role of electrons in absorption of light, electron multiplicity. Excitation and deexcitation and path of deexcited electrons. Bioluminescence, fluorescence and phosphorescence. Bioenergetics - Energy and work, laws of thermodynamics, Energy transduction in biological systems -	21 hrs	21/02/2022 to 18/04/2022		R. Thirumana Sampandan	
II from: 18/04/2022 to: 12/06/2022	redox couple, redox potential, ATP bioenergetics, NADP / NADPH redox couple, mitochondrial and chloroplast bioenergetics. <u>Unit-IV</u> Vitamins: classification, chemical structure and biological properties of vitamins A, D, E, K and B complex	9 hrs	18/04/2022 to 12/06/2022		R. Thirumana Sampandan	

KONGUNADU ARTS AND SCIENCE COLLEGE (AUTONOMOUS), COIMBATORE - 29.

ACADEMIC PLANNING

Student: Bathary

Name of the Teacher: Dr. R. J. Jeyaraj

Year 2022-2023

The Paper: Biophysics, Biochemistry and Bioinstrumentation

Subject Code: 21PB041A

Semester: ODD / EVEN

No. & Period	Topics allotted	No. of hours required for completion	Dates & hrs of handling	Topics not covered, if any	Signature of	
					Staff	HOD
1	<u>Unit IV</u> Bioinstrumentation: photometry - Beer and Lambert's law, colorimeter, UV-visible spectrophotometer, atomic absorption spectrometer, centrifuge - types and their applications, chromatography - TLC, HPLC, column, ion exchange and molecular exclusion chromatography, GLC and HPLC. Hyophilization	21 hrs	25/04/2022 to 06/05/2022			
2						