

I – Academic Planner

A. Teaching Plan (Year : 2020-21 Semester: Odd)

Teacher's Name: Dr. Renu Kathpalia Department: Botany

Sl. No .	UPC	Paper Name	Core/ AECC /GE/SEC	Topic/Unit	Start Date	End Date
1	32161102	Biomolecules and Cell Biology (Theory)	Core	Unit 1 Biomolecules Unit-2 Bioenergetics Unit-3 Enzymes	20-11-2020	14-1-2021
2	32161102	Biomolecules and Cell Biology (Practical)	Core	1. Study of plant cell structure with the help of epidermal peel mount of Onion/Rhoeo/Crinum. 2. Study the phenomenon of plasmolysis and deplasmolysis. 3. Demonstration of the phenomenon of protoplasmic streaming in Hydrilla leaf. 4. Study different stages of mitosis. 5. Separate chloroplast pigments by paper chromatography. 6. Qualitative tests for carbohydrates, reducing sugars, non-reducing sugars, lipids and proteins. 7. Study of cell and its organelles with the help of electron micrographs. 8. Study the effect of organic solvent and temperature on membrane permeability. 9. Demonstrate the activity of Urease 10. Demonstration of the activity of Catalase 11. Demonstrate the activity of Amylase	On every Monday 23-11-2020	15-02-2021
3.	321616	Plant	Core	Unit1 Concept of Metabolism	5-01-2021	7-01-2021

	01	Metabolism		Unit 2. Carbon assimilation Unit 3. Carbohydrate Metabolism Unit4 Carbon Oxidation Unit 5. ATP synthesis Unit 6. Lipid Metabolism Unit 7. Nitrogen Metabolism Unit 8. Signal Transduction	12-01-2021 3-02-2021 9-02-2021 2-03-2021 9-03-2021 23-03-2021 13-04-2021	2-02-2021 4-02-2021 25-02-2021 4-02-2021 18-03-2021 8-04-2021 22-04-2021
2	32161601	Plant Metabolism	Core	1.Isolate the chloroplast pigments by chemical methods. 2. Demonstrate dye reduction by isolated chloroplasts 3. To study the effect of light intensity on the rate of photosynthesis (atleast three intensities) 4. Compare the rates of aerobic respiration in different parts of a plant (at least three parts). 5. To study the activity of Nitrate Reductase in leaves of two plant sources. 6. To study the activity of urease enzyme and effect of substrate concentration on enzyme activity. 7. To study the effect of carbon dioxide on the rate of photosynthesis (at least three intensities) 8. Demonstration of fluorescence by isolated chloroplast pigments. 9 Demonstration of R.Q. 10.To demonstrate activity of lipase 11. To demonstrate absorption and action spectrum	4-01-2021	12-04-2021

B. Internal Assessment: House Exam (Test/Presentation etc.) & Assignment*

Course Code	Course Name	Unique Paper Code	Topic Name	Day and Date	Date/s of Exhibiting the Assessment Sheet to students, Discussing the marks, Returning/Retaining
556	B.Sc.(H) Botany	32161102	Biomolecules and Cell Biology (Theory)	Assignment on Friday 18-12-2020 Presentation -5 students per week on Thursday in extra period	
556	B.Sc.(H) Botany	32161102	Biomolecules and Cell Biology (Practical)	Test 5 th March-2021	10 th March-2021
556	B.Sc.(H) Botany	32161102	Plant Metabolism (Theory)	Test: Unit-2 on 10-02-2021 Test: Unit 3 and 4 on 4-03-2021 Presentation -5 students per week at the end of practical period	15-04-2021
556	B.Sc.(H) Botany	32161102	Plant Metabolism (Practical)	19-04-2021	26-04-2021

*Marks of the Internal Assessment to be submitted to the College 15 days before the last working day of every semester

I – Academic Planner

A. Teaching Plan (Year: 2021-22, Semester: Even Semester)

Teacher's Name: Dr. Renu Kathpalia

Department: Botany

Sl. No.	UPC	Paper Name	Core/A ECC/G E/SEC	Topic/Unit	Start Date	End Date
1	32161102	Biomolecules and Cell Biology (Theory)	Core	Unit 1 Biomolecules Unit-2 Bioenergetics Unit-3 Enzymes	26-11-2021	14-1-2022
2	32161102	Biomolecules and Cell Biology (Practical)	Core	1. Study of plant cell structure with the help of epidermal peel mount of Onion/Rhoeo/Crinum. 2. Study the phenomenon of plasmolysis and deplasmolysis. 3. Demonstration of the phenomenon of protoplasmic streaming in Hydrilla leaf. 4. Study different stages of mitosis. 5. Separate chloroplast pigments by paper chromatography. 6. Qualitative tests for carbohydrates, reducing sugars, non-reducing sugars, lipids and proteins. 7. Study of cell and its organelles with the help of electron micrographs. 8. Study the effect of organic solvent and temperature on membrane permeability. 9. Demonstrate the activity of Urease 10. Demonstration of the activity of Catalase 11. Demonstrate the activity of Amylase	On every Monday 22-11-2021	22-02-2022

3.	32161601	Plant Metabolism	Core	Unit1 Concept of Metabolism Unit-2 Enzymes Unit 3. Carbon assimilation Unit 4. Carbohydrate Metabolism Unit5. Carbon Oxidation Unit 6. ATP synthesis Unit 7. Lipid Metabolism Unit 8. Nitrogen Metabolism	4-01-2022 11-01-2022 1-02-2022 9-02-2022 1-03-2022 8-03-2022 22-03-2022 4-04-2022	7-01-2022 28-01-2022 8-02-2022 25-02-2022 4-02-2022 11-03-2022 1-04-2022 22-04-2022
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4	32161601	Plant Metabolism	Core	1. Isolate the chloroplast pigments by chemical methods. 2. Demonstrate dye reduction by isolated chloroplasts 3. To study the effect of light intensity on the rate of photosynthesis (atleast three intensities) 4. Compare the rates of aerobic respiration in different parts of a plant (at least three parts). 5. To study the activity of Nitrate Reductase in leaves of two plant sources. 6. To study the activity of urease enzyme and effect of substrate concentration on enzyme activity. 7. To study the effect of carbon dioxide on the rate of photosynthesis (at least three intensities) 8. Demonstration of fluorescence by isolated chloroplast	3-01-2022	11-04-2022
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				<p>pigments.</p> <p>9 Demonstration of R.Q.</p> <p>10.To demonstrate activity of lipase</p> <p>11. To demonstrate absorption and action spectrum</p>		
3.	421644 01	Plant physiology and Metabolism	Core	<p>1.Determine the osmotic potential of cell sap of the given material by plasmolytic method.</p> <p>2. Study the effect of light intensity (three light intensities) on the rate of transpiration using excised twig.</p> <p>3. Study the effect of light intensity (three intensities) on O₂ evolution in photosynthesis.</p> <p>4. Calculate the stomatal index and stomatal frequency of two surfaces of a xerophytic and a mesophytic leaf.</p> <p>5. Study the effect of pH on the catalase activity.</p> <p>6. Demonstrate dye reduction by isolated chloroplasts.</p>	6 th Jan, 2022	14 th April, 2022

				<p>7. Study the effect of bicarbonate concentration (three concentrations) on O₂ evolution in photosynthesis.</p> <p>8. Compare the rates of aerobic respiration using two different parts of a plant.</p> <p>9. To study the effect of enzyme concentration on the catalase activity.</p> <p>10. To Demonstrate bolting</p> <p>11. Effect of Auxin on rooting</p> <p>12. Suction due to transpiration</p> <p>13. To demonstrate effect of cytokinin on delay of senescence</p> <p>14. Role of ethylene in fruit ripening.</p> <p>15. Hydroponics</p>		
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B. Internal Assessment: House Exam (Test/Presentation etc.) & Assignment*

Course Code	Course Name	Unique Paper Code	Topic Name	Day and Date	Date/s of Exhibiting the Assessment Sheet to students, Discussing the marks, Returning/Retaining
556	B.Sc.(H) Botany	32161102	Biomolecules and Cell Biology (Theory)	Assignment on Friday 18 th March 2022 Presentation -5 students per week on Thursday in extra period	

556	B.Sc.(H) Botany	32161102	Biomolecules and Cell Biology (Practical)	Test 28 th March- 2022	7 th March-2022
556	B.Sc.(H) Botany	32161102	Plant Metabolism (Theory)	Test: Unit-2 on 18-02-2022 Test: Unit 3 and 4 on 4-03-2022 Presentation -5 students per week at the end of practical period	8-04-2022
556	B.Sc.(H) Botany	32161102	Plant Metabolism (Practical)	11-04-2022	18-04-2022
	B.Sc.(Prog) Life Science	42164401	Plant Physiology and Metabolism	7 th April, 2022	14 th April, 2022

***Marks of the Internal Assessment to be submitted to the College 15 days before the last working day of every semester**

C. FDP/Seminar/Workshops/Lectures to be attended and/or to be conducted by Teachers

Event Topic	Ecological entrepreneurship for transforming adversity into prosperity and designing the new earth		
Type / Nature (FDP/Webinar/Workshop etc.)	Webinar		
Organizing In-charge	Prof. Rajni Gupta, Kirori Mal College		
Details regarding invited Resource Person	PROF. RADHEYSHYAM SHARMA (Dept. Of Environmental Studies, Laboratory of Bioresources and environmental biotechnology, University of Delhi)		
Nature of Participation (e.g. Invited Speaker, Participant etc.)	Participant		
Date/s	5 th June, 2021	Timing/s	3 to 5 pm
		Mode	Lecture

Event Topic	Understanding Mucormycosis and its relevance during COVID-19		
Type / Nature (FDP/Webinar/Workshop etc.)	Webinar		
Organizing In-charge	Prof. Rajni Gupta, Kirori Mal College		
Details regarding invited Resource Person	PROF. RUPAM KAPOOR (Department of Botany, University of Delhi)		
Nature of Participation (e.g. Invited Speaker, Participant etc.)	Participant		
Date/s	June 22, 2021	Timing/s	3.00 pm to 5.00 pm
		Mode	Online Lecture

EventTopic	“Ethnobotany to domestication in tribal dominated tracts of agribiodiversityinIndia”		
Type/Nature(FDP/Webinar/Workshop etc.)	Webinar		
OrganizingIn-charge	Prof. Anita.K.Verma		
Detailsregarding invitedResource Person	Dr.AnjulaPandey(PrincipalScientist,ICAR,NBPGR).		
NatureofParticipation(e.g.Invited Speaker,Participantetc.)	Participant		
Date/s	17 th September,2021	Timing/s	3.00pm to5.00pm
		Mode	Online Lecture

EventTopic	Nanomedicine:BiomoleculesforHuman Health (NBHH-2021)”-Small MoleculesBigOppurtunties		
Type / Nature (FDP/Webinar/Workshopetc.)	Two-Day InternationalConference		
OrganizingIn-charge	Prof. AnitaKamra and Dr.RenuKathpalia, KiroriMalCollege		

Details regarding invited Resource Person		Day 1: Prof. Sunil Krishnan , Mayo Clinic, Florida, USA, Prof. V. S. Chauhan , Arturo Falaschi Emeritus Scientist, ICGEB, Dr. A.K. Mishra, DG, INMAS, Delhi, Dr. A.K. Panda , Former director, National Institute of Immunology, Prof. N.G. Sahoo , Department of Chemistry, Kumaon University, Dr. Neetu Singh , IIT, Delhi Day 2: Dr. Tymish Y. Ohulchanskyy , Deputy Director, Photomedicine Institute for Laser, Shenzhen University, China, Dr. Sushma Talegaonkar , DPSURU, Dr. Zeenat Iqbal , Jamia Hamdard, Prof. Sujata Mohanty , AIIMS, New Delhi; Dr. Sangram Keshari Samal , ICMR, Regional Medical Research Centre, Bhubaneswar, Prof. Indrajit Roy , Dept of Chemistry, University of Delhi, Prof. Kamalinder K Singh , Professor of Nanomedicine, University of Central Lancashire (UCLan, UK), Dr. Neill Liptrott , University of Liverpool, UK, Prof. S. Kundu , Director, South Campus, University of Delhi			
Nature of Participation (e.g. Invited Speaker, Participant etc.)		Participant			
Date/s	27 th -28 th September, 2021	Timing/s	9.00 am to 5.00 pm	Mode	Online Lectures

Event Topic		Nanomedicine			
Type/Nature (FDP/Webinar/Workshop etc.)		Workshop			
Organizing In-charge		Prof. Anita Kamra and Dr. Renu Kathpalia, Kirori Mal College			
Details regarding invited Resource Person					
Nature of Participation (e.g. Invited Speaker, Participant etc.)		Participant			
Date/s	29 th September, 2021	Timing/s	9.00 am to 5.00 pm	Mode	Online Lectures

Event Topic	Workshop on “Application of bioinformatics for pedagogy of plant science”				
Type/Nature (FDP/Webinar/Workshop etc.)	Workshop				
Organizing In-charge	Prof. Rajni Gupta, Kirori Mal College				
Details regarding invited Resource Person	DAY1: DR. HEMANT RITURAJ KUSHWAHA (School of Biotechnology, Jawaharlal Nehru University) DAY2: PROF. SUDESHNA M. LEIGHTON (Department of Botany, University of Delhi)				
Nature of Participation (e.g. Invited Speaker, Participant etc.)	Participant				
Date/s	22 nd July to 23 rd July, 2021	Timing/s	Day 1: 3.00pm-5.00pm Day 2: 3.00pm-5.00pm	Mode	Online at Zoom
					Hands on

Event Topic	eDOPS-An Electronic Database of Plants: An important resource for identification of different plants				
Type/Nature (FDP/Webinar/Workshop etc.)	Lecture				
Organizing In-charge	Prof. Anita K. Verma				
Details regarding invited Resource Person	Prof. Avinash Nagpal, Department of Botanical and Environmental Sciences, Guru Nanak Dev University				
Nature of Participation (e.g. Invited Speaker, Participant etc.)	Participant				
Date/s	12 February 2022	Timing/s	11.0 am- 1.00pm	Mode	Online at G-meet

EventTopic	“Carbon Credit”				
Type / Nature (FDP/Webinar/Workshopetc.)	Webinar				
OrganizingIn-charge	Prof. RajniGupta				
Detailsregarding invitedResource Person	Ms AnkitaShukla				
Nature of Participation (e.g. InvitedSpeaker,Participantetc.)	Participant				
Date/s	4 th March , 2022	Timing/s	3.0 pm- 1500pm	Mode	Online atG-meet

EventTopic	“Wetlands”				
Type / Nature (FDP/Webinar/Workshopetc.)	Lecture				
OrganizingIn-charge	PROF.RAJNIGUPTA				
Detailsregarding invitedResource Person	Prof.P.L.Uniyal(DepartmentofBotany,UniversityofDelhi)				
NatureofParticipation(e.g.Invited Speaker,Participantetc.)	Participant				
Date/s	4 th March, 2022	Timing/s	9.30 am– 12.00pm	Mode	Online atG-meet

EventTopic	“Sustainable UrbanGardening”		
Type / Nature (FDP/Webinar/Workshopetc.)	Workshop		

Organizing In-charge	Dr.Renu Kathpalia & Prof Anita Kamra Verma				
Details regarding invited Resource Person	Mr. Pravin Mishra (Urban Farmer)				
Nature of Participation (e.g. Invited Speaker, Participant etc.)	Participant				
Date/s	6 th June, 2022	Timing/s	10.30 am – 1.00 pm	Mode	Offline