

SEM: 2 (DSC)

THEORY

BOTGCOR02T(CREDIT: 4)

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS and GENERAL)												
NAME OF THE DEPARTMENT						Botany						
HOD		DR. AYANA CHAKRABORTY										
INITIALS OF FACULTIES		DAY	AC	AB1	SDG	SS	ABJ					
		MORN										
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020						HONS		GENERAL	
											√	
SEM		2	Core Course			2		CREDIT POINT	4	Course Code	BOTGCORO2T	
			DSC									
Name of the Course			PLANT ECOLOGY AND TAXONOMY									
Course Co-ordinator			DR. AYANA CHAKRABORTY									
TOTAL MARKS	50		TH	√		TUT				PRAC		
TOTAL HOURS	60		TH	√		TUT				PRAC		
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				1								
NAME OF THE UNIT/MODULE				INTRODUCTION								
TOTAL HOURS	2		THEORY	√		TUTORIAL				PRAC		
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)												
SL	LECTURE HEAD/TOPIC						HR	Teacher	Month			
1	Introduction						1	AB	JAN			
2	General significance						1	AB	JAN			

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS and GENERAL)											
NAME OF THE DEPARTMENT					Botany						
HOD		DR. AYANA CHAKRABORTY									
INITIALS OF FACULTIES		DAY	AC	AB1	SDG	SS	AB				
		MORN									
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020				HONS		GENERAL		
									√		
SEM		2	Core Course DSC			2	CREDIT POINT		4	Course Code	BOTGCORO2T
Name of the Course			PLANT ECOLOGY AND TAXONOMY								
Course Co-ordinator			DR. AYANA CHAKRABORTY								
TOTAL MARKS	50	TH	√	TUT				PRAC			
TOTAL HOURS	60	TH	√	TUT				PRAC			
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				2							
NAME OF THE UNIT/MODULE				Ecological factors							
TOTAL HOURS	10	THEORY	√	TUTORIAL				PRAC			
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/TOPIC						HR	Teacher	Month		
1	Introduction						1	AB	JAN		
2	Soil: Origin and composition						1	AB	FEB		
3	Soil profile						1	AB	FEB		
4	Water: States of water in the environment,						1	AB	FEB		
5	Light: Variation Optimal and limiting factors;						1	AB	MAR		
6	Temperature: Variation Optimal and limiting factors;						1	AB	MAR		
7	Shelford law of tolerance.						1	AB	MAR		
8	Adaptation of hydrophytes						1	AB	MAR		
9	Adaptation of xerophytes						1	AB	APR		
10	Doubt clearing class / Class test						1	AB	APR		
Total Hours						10					

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NAME OF THE DEPARTMENT					Botany						
HOD		DR. AYANA CHAKRABORTY									
INITIALS OF FACULTIES		DAY	AC	AB1	SDG	SS	AB				
		MORN									
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020					HONS		GENERAL	
									√		
SEM		2	Core Course DSC			2	CREDIT POINT		4	Course Code	BOTGCORO2T
Name of the Course			PLANT ECOLOGY AND TAXONOMY								
Course Co-ordinator			DR. AYANA CHAKRABORTY								
TOTAL MARKS	50	TH	√	TUT		PRAC					
TOTAL HOURS	60	TH	√	TUT		PRAC					
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				3							
NAME OF THE UNIT/MODULE				Plant communities							
TOTAL HOURS	6	THEORY	√	TUTORIAL		PRAC					
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/TOPIC						HR	Teacher	Month		
1	Introduction						1	SDG	JAN		
2	Characters						1	SDG	JAN		
3	Ecotone and edge effect						1	SDG	FEB		
4	Succession: Processes and types						1	SDG	FEB		
5	Succession: Hydrosere and Xerosere						1	SDG	FEB		
6	Doubt clearing class						1	SDG	FEB		
Total Hours						6					

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NAME OF THE DEPARTMENT					Botany						
HOD		DR. AYANA CHAKRABORTY									
INITIALS OF FACULTIES		DAY	AC	AB1	SDG	SS	AB				
		MORN									
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020					HONS		GENERAL	
									√		
SEM		2	Core Course DSC			2	CREDIT POINT		4	Course Code	BOTGCORO2T
Name of the Course			PLANT ECOLOGY AND TAXONOMY								
Course Co-ordinator			DR. AYANA CHAKRABORTY								
TOTAL MARKS	50	TH	√	TUT		PRAC					
TOTAL HOURS	60	TH	√	TUT		PRAC					
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				4							
NAME OF THE UNIT/MODULE				Ecosystem							
TOTAL HOURS	8	THEORY	√	TUTORIAL		PRAC					
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/TOPIC						HR	Teacher	Month		
1	Introduction						1	AC	JAN		
2	Structure and energy flow trophic organisation						1	AC	JAN		
3	Food chains and food webs						1	AC	JAN		
4	Ecological pyramids						1	AC	JAN		
5	production and productivity						1	AC	JAN		
6	Biogeochemical cycling						1	AC	JAN		
7	Cycling of carbon in atmosphere						1	AC	JAN		
8	Cycling of nitrogen						1	AC	FEB		
	Total Hours						8				

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NAME OF THE DEPARTMENT					Botany						
HOD		DR. AYANA CHAKRABORTY									
INITIALS OF FACULTIES		DAY	AC	AB1	SDG	SS	AB				
		MORN									
PERIOD OF SEMESTER								HONS	GENERAL √		
			FROM JANUARY 2020 TO JUNE 2020								
SEM		2	Core Course DSC			2		CREDIT POINT	4	Course Code	BOTGCORO2T
Name of the Course			PLANT ECOLOGY AND TAXONOMY								
Course Co-ordinator			DR. AYANA CHAKRABORTY								
TOTAL MARKS	50		TH	√		TUT			PRAC		
TOTAL HOURS	60		TH	√		TUT			PRAC		
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				5							
NAME OF THE UNIT/MODULE				Phytogeography							
TOTAL HOURS	4		THEORY	√		TUTORIAL			PRAC		
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/TOPIC						HR	TEACHER	MONTH		
1	Introduction						1	SS	JAN		
2	Principal biogeographical zones						1	SS	JAN		
3	Endemism: Definition, types and theories						1	SS	FEB		
4	Endemism: significance						1	SS	FEB		
	Total Hours						4				

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS and GENERAL)												
NAME OF THE DEPARTMENT						Botany						
HOD		DR. AYANA CHAKRABORTY										
INITIALS OF FACULTIES		DAY	AC	AB1	SDG	SS	AB					
		MORN										
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020						HONS		GENERAL	
											√	
SEM		2	Core Course			2		CREDIT POINT	4	Course Code	BOTGCORO2T	
			DSC									
Name of the Course			PLANT ECOLOGY AND TAXONOMY									
Course Co-ordinator			DR. AYANA CHAKRABORTY									
TOTAL MARKS		50	TH	√	TUT				PRAC			
TOTAL HOURS		60	TH	√	TUT				PRAC			
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				6								
NAME OF THE UNIT/MODULE				Introduction to plant taxonomy								
TOTAL HOURS		2	THEORY	√	TUTORIAL				PRAC			
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)												
SL	LECTURE HEAD/TOPIC							HR	TEACHER	MONTH		
1	Identification							1	AC	FEB		
2	Classification, Nomenclature.							1	AC	FEB		
	Total Hours							2				

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS and GENERAL)												
NAME OF THE DEPARTMENT						Botany						
HOD		DR. AYANA CHAKRABORTY										
INITIALS OF FACULTIES		DAY	AC	AB1	SDG	SS	AB					
		MORN										
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020						HONS		GENERAL	
											√	
SEM		2	Core Course			2		CREDIT POINT	4	Course Code	BOTGCORO2T	
DSC												
Name of the Course			PLANT ECOLOGY AND TAXONOMY									
Course Co-ordinator			DR. AYANA CHAKRABORTY									
TOTAL MARKS		50	TH	√	TUT			PRAC				
TOTAL HOURS		60	TH	√	TUT			PRAC				
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				7								
NAME OF THE UNIT/MODULE				Identification								
TOTAL HOURS		4	THEORY	√	TUTORIAL			PRAC				
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)												
SL	LECTURE HEAD/TOPIC						HR	TEACHER	MONTH			
1	Introduction						1	AC	FEB			
2	Functions of Herbarium						1	AC	FEB			
3	Important herbaria and botanical gardens of the world and India						1	AC	FEB			
4	Documentation: Flora, Keys						1	AC	FEB			
Total Hours						4						

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INITIALS OF FACULTIES		DAY	AC	AB1	SDG	SS	AB				
		MORN									
PERIOD OF SEMESTER								HONS	GENERAL √		
			FROM JANUARY 2020 TO JUNE 2020								
SEM		2	Core Course			2	CREDIT POINT		4	Course Code	BOTGCORO2T
			DSC								
Name of the Course			PLANT ECOLOGY AND TAXONOMY								
Course Co-ordinator			DR. AYANA CHAKRABORTY								
TOTAL MARKS		50	TH	√	TUT			PRAC			
TOTAL HOURS		60	TH	√	TUT			PRAC			
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				8							
NAME OF THE UNIT/MODULE				Taxonomic evidences from palynology, cytology, phytochemistry and molecular data							
TOTAL HOURS		6	THEORY	√	TUTORIAL			PRAC			
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/TOPIC						HR	TEACHER	MONTH		
1	Introduction						1	SDG	MAR		
2	Taxonomic evidences from palynology						1	SDG	MAR		
3	Taxonomic evidences from cytology						1	SDG	MAR		
4	Taxonomic evidences from phytochemistry						1	SDG	MAR		
5	Taxonomic evidences from molecular data						1	SDG	APR		
6	Doubt clearing class						1	SDG	APR		
Total Hours						6					

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NAME OF THE DEPARTMENT						Botany						
HOD		DR. AYANA CHAKRABORTY										
INITIALS OF FACULTIES		DAY	AC	AB1	SDG	SS	AB					
		MORN										
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020						HONS		GENERAL	
											√	
SEM		2	Core Course			2		CREDIT POINT	4	Course Code	BOTGCORO2T	
			DSC									
Name of the Course			PLANT ECOLOGY AND TAXONOMY									
Course Co-ordinator			DR. AYANA CHAKRABORTY									
TOTAL MARKS		50	TH	√	TUT				PRAC			
TOTAL HOURS		60	TH	√	TUT				PRAC			
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC					9							
NAME OF THE UNIT/MODULE					Taxonomic hierarchy							
TOTAL HOURS		2	THEORY	√	TUTORIAL				PRAC			
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)												
SL	LECTURE HEAD/TOPIC							HR	TEACHER	MONTH		
1	Ranks, categories							1	AC	FEB		
2	Taxonomic groups.							1	AC	FEB		
	Total Hours							2				

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INITIALS OF FACULTIES		DAY	AC	AB1	SDG	AB						
		MORN										
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020						HONS		GENERAL	
											√	
SEM		2	Core Course			2		CREDIT POINT	4	Course Code	BOTGCORO2T	
DSC												
Name of the Course			PLANT ECOLOGY AND TAXONOMY									
Course Co-ordinator			DR. AYANA CHAKRABORTY									
TOTAL MARKS		50	TH	√	TUT					PRAC		
TOTAL HOURS		60	TH	√	TUT					PRAC		
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				10								
NAME OF THE UNIT/MODULE				Botanical nomenclature								
TOTAL HOURS		6	THEORY	√	TUTORIAL					PRAC		
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)												
SL	LECTURE HEAD/TOPIC							HR	TEACHER	MONTH		
1	Principles and rules (ICN)							1	AC	MAR		
2	Ranks and names and Binominal system							1	AC	MAR		
3	Typification							1	AC	MAR		
4	Author citation and rule of priority							1	AC	MAR		
5	Valid and effective publication							1	AC	MAR		
6	Class test							1	AC	MAR		
Total Hours							6					

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HOD		DR. AYANA CHAKRABORTY										
INITIALS OF FACULTIES		DAY	AC	AB1	SDG	SS	AB					
		MORN										
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020						HONS		GENERAL	
											√	
SEM		2	Core Course			2		CREDIT POINT	4	Course Code	BOTGCORO2T	
DSC												
Name of the Course			PLANT ECOLOGY AND TAXONOMY									
Course Co-ordinator			DR. AYANA CHAKRABORTY									
TOTAL MARKS		50	TH	√	TUT					PRAC		
TOTAL HOURS		60	TH	√	TUT					PRAC		
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC					11							
NAME OF THE UNIT/MODULE					Classification							
TOTAL HOURS		6	THEORY	√	TUTORIAL					PRAC		
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)												
SL	LECTURE HEAD/TOPIC							HR	TEACHER	MONTH		
1	Introduction and criteria of classification							1	SDG	APR		
2	Types of classification- artificial, natural and phylogenetic.							1	SDG	APR		
3	Merits and demerits of artificial, natural and phylogenetic classification							1	SDG	APR		
4	Bentham and Hooker (up to series),							1	AB	APR		
5	General idea of Cronquist's classification (1981).							1	AB	APR		
6	Comparison between Bentham and Hooker (up to series), and General idea of Cronquist's classification (1981).							1	SDG	MAY		
Total Hours							6					

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INITIALS OF FACULTIES		DAY	AC	AB1	SDG	SS	AB					
		MORN										
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020						HONS		GENERAL	
											√	
SEM		2	Core Course			2		CREDIT POINT	4	Course Code	BOTGCORO2T	
DSC												
Name of the Course			PLANT ECOLOGY AND TAXONOMY									
Course Co-ordinator			DR. AYANA CHAKRABORTY									
TOTAL MARKS		50	TH	√	TUT				PRAC			
TOTAL HOURS		60	TH	√	TUT				PRAC			
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC					12							
NAME OF THE UNIT/MODULE					Numerical taxonomy and cladistics							
TOTAL HOURS		4	THEORY	√	TUTORIAL				PRAC			
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)												
SL	LECTURE HEAD/TOPIC							HR	TEACHER	MONTH		
1	Characters							1	AC	MAR		
2	Variations and cluster analysis							1	AC	APR		
3	Phenograms and Cladograms (definitions and differences).							1	AC	APR		
4	Class test							1	AC	APR		
Total Hours							4					

SEM: 2(DSC)

PRACTICAL

BOTGCOR02P (CREDIT: 2)

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS and GENERAL)											
NAME OF THE DEPARTMENT						Botany					
HOD		DR. AYANA CHAKRABORTY									
INITIALS OF FACULTIES		DAY	AC	AB	SDG	SS	ABJ				
		MORN									
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020					HONS		GENERAL √	
SEM		2	Core Course DSC			2	CREDIT POINT		2	Course Code	BOTGCORO2P
Name of the Course			PLANT ECOLOGY AND TAXONOMY								
Course Co-ordinator			DR. AYANA CHAKRABORTY								
TOTAL MARKS	25	TH				TUT			PRAC	√	
TOTAL HOURS	60	TH				TUT			PRAC	√	
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				1							
NAME OF THE UNIT/MODULE				PLANT ECOLOGY AND TAXONOMY							
TOTAL HOURS	60	THEORY				TUTORIAL			PRAC		√
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/TOPIC					HR	TEACHER		MONTH		
1	Study of Soil thermometer maximum and minimum thermometer.....its working principal and use					2	AB & SS		JANUARY		
2	Study of anemometer.....its working principal and use					2	AB & SS		FEBRUARY		
3	Study of psychrometer/hygrometer.....its working principal and use					2	AB & SS		FEBRUARY		
4	Study of rain gauge.....its working principal and use					2	AB & SS		FEBRUARY		
5	Study of lux meter.....its working principal and use					2	AB & SS		FEBRUARY		
6	Determination of soil pH through pH meter (two soil samples)					2	AB & SS		MARCH		
7	Determination of carbonate (two soil samples)					2	AB & SS		MARCH		
8	Determination of chlorides (two soil samples)					2	AB & SS		MARCH		
9	Determination of nitrates (two soil samples)					2	AB & SS		APRIL		
10	Determination of sulphates (two soil samples)					2	AB & SS		APRIL		
11	Determination of organic matter (two soil samples) by Rapid filtration test					2	AB & SS		APRIL		
12	Study of morphological adaptations of hydrophytes (<i>Nymphaea</i>)					2	AB & SS		MAY		
13	Study of morphological adaptations xerophytes (<i>Nerium</i> leaf)					2	AB & SS		MAY		
14	Study of biotic interactions of stem parasite (<i>Cuscuta</i>)					2	AC & SDG		JANUARY		
15	Study of biotic interactions of epiphytes (Orchid root)					2	AC & SDG		JANUARY		
16	Determination of minimal quadrat size for the study					2	AC & SDG		JANUARY		

	of herbaceous vegetation			
17	Quantitative analysis of herbaceous vegetation in the college campus /suitable site for frequency and comparison with Raunkiaer's frequency distribution law	2	AC & SDG	JANUARY
18	Introduction to plant taxonomy, Bentham Hooker System, Bengal Plants, key preparation for identification of angiospermic plants.	2	AC & SDG	FEBRUARY
19	Study of vegetative and floral characters (Description, V.S. of flower, section of ovary, floral diagram/s, floral formula/e and systematic position according to Bentham & Hooker's system of classification) of Brassicaceae – <i>Nasturtium indicum</i> .	2	AC & SDG	FEBRUARY
20	Study of vegetative and floral characters (Description, V.S. of flower, section of ovary, floral diagram/s, floral formula/e and systematic position according to Bentham & Hooker's system of classification) of Asteraceae - <i>Eclipta</i>	2	AC & SDG	FEBRUARY
21	Study of vegetative and floral characters (Description, V.S. of flower, section of ovary, floral diagram/s, floral formula/e and systematic position according to Bentham & Hooker's system of classification) of Asteraceae - <i>Tridax</i>	2	AC & SDG	FEBRUARY
22	Study of vegetative and floral characters (Description, V.S. of flower, section of ovary, floral diagram/s, floral formula/e and systematic position according to Bentham & Hooker's system of classification) of Solanaceae– <i>Nicotiana glauca</i>	2	AC & SDG	MARCH
23	Study of vegetative and floral characters (Description, V.S. of flower, section of ovary, floral diagram/s, floral formula/e and systematic position according to Bentham & Hooker's system of classification) of Solanaceae– <i>Solanum nigrum</i>	2	AC & SDG	MARCH
24	Study of vegetative and floral characters (Description, V.S. of flower, section of ovary, floral diagram/s, floral formula/e and systematic position according to Bentham & Hooker's system of classification) of Lamiaceae - <i>Leonurus sibiricus</i>	2	AC & SDG	MARCH
25	Study of vegetative and floral characters (Description, V.S. of flower, section of ovary, floral diagram/s, floral formula/e and systematic position according to Bentham & Hooker's system of classification) of Lamiaceae - <i>Leucas aspera</i>	2	AC & SDG	MARCH
26	Study of vegetative and floral characters (Description, V.S. of flower, section of ovary, floral diagram/s, floral formula/e and systematic position according to Bentham & Hooker's system of classification) of Lamiaceae - <i>Ocimum sanctum</i>	2	AC & SDG	APR
27	Study of vegetative and floral characters (Description, V.S. of flower, section of ovary, floral diagram/s, floral formula/e and systematic position according to Bentham	2	AC & SDG	APR

	& Hooker's system of classification) of Liliaceae - <i>Allium</i> .			
28	Demonstration of Herbarium preparation	2	AC & SDG	APR
29	Practice class	2	AC & SDG	MAY
30	Practice class	2	AC & SDG	MAY
	TOTAL HOURS	60		

SEM: 2(GE)

THEORY

BOTHGEC02T(CREDIT: 4)

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS and GENERAL)												
NAME OF THE DEPARTMENT						Botany						
HOD		DR. AYANA CHAKRABORTY										
INITIALS OF FACULTIES		DAY	AC	AB	SDG	SS	ABJ					
		MORN										
PERIOD OF SEMESTER									HONS		GENERAL	
			FROM JANUARY 2020 TO JUNE 2020								√	
SEM		2	Core Course			2		CREDIT POINT	4	Course Code	BOTHGECO2T	
			GE									
Name of the Course			PLANT ECOLOGY AND TAXONOMY									
Course Co-ordinator			DR. AYANA CHAKRABORTY									
TOTAL MARKS	50		TH	√		TUT			PRAC			
TOTAL HOURS	60		TH	√		TUT			PRAC			
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC					1							
NAME OF THE UNIT/MODULE					INTRODUCTION							
TOTAL HOURS	2		THEORY	√		TUTORIAL			PRAC			
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)												
SL	LECTURE HEAD/TOPIC							HR	TEACHER	MONTH		
1	Introduction							1	AB	JAN		
2	General significance							1	AB	JAN		
	Total Hours							2				

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS and GENERAL)											
NAME OF THE DEPARTMENT					Botany						
HOD		DR. AYANA CHAKRABORTY									
INITIALS OF FACULTIES		DAY	AC	AB	SDG	SS	ABJ				
		MORN									
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020					HONS		GENERAL √	
			SEM		2	Core Course GE		2	CREDIT POINT		4
Name of the Course			PLANT ECOLOGY AND TAXONOMY								
Course Co-ordinator			DR. AYANA CHAKRABORTY								
TOTAL MARKS		50	TH	√	TUT			PRAC			
TOTAL HOURS		60	TH	√	TUT			PRAC			
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				2							
NAME OF THE UNIT/MODULE				Ecological factors							
TOTAL HOURS		10	THEORY	√	TUTORIAL			PRAC			
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/TOPIC					HR	TEACHER	MONTH			
1	Introduction					1	AB	JAN			
2	Soil: Origin and composition					1	AB	FEB			
3	Soil profile					1	AB	FEB			
4	Water: States of water in the environment,					1	AB	FEB			
5	Light: Variation Optimal and limiting factors;					1	AB	MAR			
6	Temperature: Variation Optimal and limiting factors;					1	AB	MAR			
7	Shelford law of tolerance.					1	AB	MAR			
8	Adaptation of hydrophytes					1	AB	MAR			
9	Adaptation of xerophytes					1	AB	APR			
10	Doubt clearing class / Class test					1	AB	APR			
Total Hours					10						

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS and GENERAL)											
NAME OF THE DEPARTMENT					Botany						
HOD		DR. AYANA CHAKRABORTY									
INITIALS OF FACULTIES		DAY	AC	AB	SDG	SS	ABJ				
		MORN									
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020					HONS		GENERAL √	
			SEM		2	Core Course GE		2	CREDIT POINT		4
Name of the Course			PLANT ECOLOGY AND TAXONOMY								
Course Co-ordinator			DR. AYANA CHAKRABORTY								
TOTAL MARKS		50	TH	√	TUT			PRAC			
TOTAL HOURS		60	TH	√	TUT			PRAC			
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				3							
NAME OF THE UNIT/MODULE				Plant communities							
TOTAL HOURS		6	THEORY	√	TUTORIAL			PRAC			
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/TOPIC					HR	TEACHER	MONTH			
1	Introduction					1	SDG	JAN			
2	Characters					1	SDG	JAN			
3	Ecotone and edge effect					1	SDG	FEB			
4	Succession: Processes and types					1	SDG	FEB			
5	Succession: Hydrosere and Xerosere					1	SDG	FEB			
6	Doubt clearing class					1	SDG	FEB			
Total Hours					6						

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS and GENERAL)												
NAME OF THE DEPARTMENT						Botany						
HOD		DR. AYANA CHAKRABORTY										
INITIALS OF FACULTIES		DAY	AC	AB	SDG	SS	ABJ					
		MORN										
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020						HONS		GENERAL	
											√	
SEM		2	Core Course			2		CREDIT POINT	4	Course Code	BOTHGECO2T	
			GE									
Name of the Course			PLANT ECOLOGY AND TAXONOMY									
Course Co-ordinator			DR. AYANA CHAKRABORTY									
TOTAL MARKS		50	TH	√	TUT				PRAC			
TOTAL HOURS		60	TH	√	TUT				PRAC			
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC					4							
NAME OF THE UNIT/MODULE					Ecosystem							
TOTAL HOURS		8	THEORY	√	TUTORIAL				PRAC			
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)												
SL	LECTURE HEAD/TOPIC							HR	TEACHER	MONTH		
1	Introduction							1	AC	JAN		
2	Structure and energy flow trophic organisation							1	AC	JAN		
3	Food chains and food webs							1	AC	JAN		
4	Ecological pyramids							1	AC	JAN		
5	production and productivity							1	AC	JAN		
6	Biogeochemical cycling							1	AC	JAN		
7	Cycling of carbon in atmosphere							1	AC	JAN		
8	Cycling of nitrogen							1	AC	FEB		
Total Hours							8					

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS and GENERAL)												
NAME OF THE DEPARTMENT						Botany						
HOD		DR. AYANA CHAKRABORTY										
INITIALS OF FACULTIES		DAY	AC	AB	SDG	SS	ABJ					
		MORN										
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020						HONS		GENERAL	
											√	
SEM		2	Core Course			2		CREDIT POINT	4	Course Code	BOTHGECO2T	
		GE										
Name of the Course			PLANT ECOLOGY AND TAXONOMY									
Course Co-ordinator			DR. AYANA CHAKRABORTY									
TOTAL MARKS	50	TH	√	TUT		PRAC						
TOTAL HOURS	60	TH	√	TUT		PRAC						
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				5								
NAME OF THE UNIT/MODULE				Phytogeography								
TOTAL HOURS	4	THEORY	√	TUTORIAL		PRAC						
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)												
SL	LECTURE HEAD/TOPIC							HR	TEACHER	MONTH		
1	Introduction							1	SS	JAN		
2	Principal biogeographical zones							1	SS	JAN		
3	Endemism: Definition, types and theories							1	SS	FEB		
4	Endemism: significance							1	SS	FEB		
Total Hours							4					

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS and GENERAL)											
NAME OF THE DEPARTMENT					Botany						
HOD		DR. AYANA CHAKRABORTY									
INITIALS OF FACULTIES		DAY	AC	AB	SDG	SS	ABJ				
		MORN									
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020					HONS		GENERAL	
										√	
SEM		2	Core Course			2		CREDIT POINT	4	Course Code	BOTHGECO2T
			GE								
Name of the Course			PLANT ECOLOGY AND TAXONOMY								
Course Co-ordinator			DR. AYANA CHAKRABORTY								
TOTAL MARKS		50	TH	√	TUT			PRAC			
TOTAL HOURS		60	TH	√	TUT			PRAC			
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				6							
NAME OF THE UNIT/MODULE				Introduction to plant taxonomy							
TOTAL HOURS		2	THEORY	√	TUTORIAL			PRAC			
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/TOPIC						HR	TEACHER	MONTH		
1	Identification						1	AC	FEB		
2	Classification, Nomenclature.						1	AC	FEB		
	Total Hours						2				

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS and GENERAL)											
NAME OF THE DEPARTMENT					Botany						
HOD		DR. AYANA CHAKRABORTY									
INITIALS OF FACULTIES		DAY	AC	AB	SDG	SS	ABJ				
		MORN									
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020					HONS		GENERAL √	
			SEM		2	Core Course GE		2	CREDIT POINT		4
Name of the Course			PLANT ECOLOGY AND TAXONOMY								
Course Co-ordinator			DR. AYANA CHAKRABORTY								
TOTAL MARKS		50	TH	√	TUT			PRAC			
TOTAL HOURS		60	TH	√	TUT			PRAC			
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC					7						
NAME OF THE UNIT/MODULE					Identification						
TOTAL HOURS		4	THEORY	√	TUTORIAL			PRAC			
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/TOPIC						HR	TEACHER	MONTH		
1	Introduction						1	AC	FEB		
2	Functions of Herbarium						1	AC	FEB		
3	Important herbaria and botanical gardens of the world and India						1	AC	FEB		
4	Documentation: Flora, Keys						1	AC	FEB		
Total Hours						4					

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS and GENERAL)											
NAME OF THE DEPARTMENT					Botany						
HOD		DR. AYANA CHAKRABORTY									
INITIALS OF FACULTIES		DAY	AC	AB	SDG	SS	ABJ				
		MORN									
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020					HONS		GENERAL √	
			SEM		2	Core Course GE		2	CREDIT POINT		4
Name of the Course			PLANT ECOLOGY AND TAXONOMY								
Course Co-ordinator			DR. AYANA CHAKRABORTY								
TOTAL MARKS		50	TH	√	TUT			PRAC			
TOTAL HOURS		60	TH	√	TUT			PRAC			
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				8							
NAME OF THE UNIT/MODULE				Taxonomic evidences from palynology, cytology, phytochemistry and molecular data							
TOTAL HOURS		6	THEORY		√	TUTORIAL		PRAC			
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/TOPIC					HR	TEACHER	MONTH			
1	Introduction					1	SDG	MAR			
2	Taxonomic evidences from palynology					1	SDG	MAR			
3	Taxonomic evidences from cytology					1	SDG	MAR			
4	Taxonomic evidences from phytochemistry					1	SDG	MAR			
5	Taxonomic evidences from molecular data					1	SDG	APR			
6	Doubt clearing class					1	SDG	APR			
Total Hours					6						

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS and GENERAL)													
NAME OF THE DEPARTMENT						Botany							
HOD		DR. AYANA CHAKRABORTY											
INITIALS OF FACULTIES		DAY	AC	AB	SDG	SS	ABJ						
		MORN											
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020						HONS		GENERAL		
											√		
SEM		2	Core Course			2			CREDIT POINT	4	Course Code	BOTHGECO2T	
			GE										
Name of the Course			PLANT ECOLOGY AND TAXONOMY										
Course Co-ordinator			DR. AYANA CHAKRABORTY										
TOTAL MARKS		50	TH	√	TUT				PRAC				
TOTAL HOURS		60	TH	√	TUT				PRAC				
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC					9								
NAME OF THE UNIT/MODULE					Taxonomic hierarchy								
TOTAL HOURS		2	THEORY	√	TUTORIAL				PRAC				
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)													
SL	LECTURE HEAD/TOPIC							HR	TEACHER	MONTH			
1	Ranks, categories							1	AC	FEB			
2	Taxonomic groups.							1	AC	FEB			
	Total Hours							2					

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS and GENERAL)											
NAME OF THE DEPARTMENT					Botany						
HOD		DR. AYANA CHAKRABORTY									
INITIALS OF FACULTIES		DAY	AC	AB	SDG	SS	ABJ				
		MORN									
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020					HONS		GENERAL √	
			SEM		2		CREDIT POINT		4		Course Code
		Core Course GE		2						BOTHGECO2T	
Name of the Course			PLANT ECOLOGY AND TAXONOMY								
Course Co-ordinator			DR. AYANA CHAKRABORTY								
TOTAL MARKS		50		TH		√		TUT		PRAC	
TOTAL HOURS		60		TH		√		TUT		PRAC	
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC					10						
NAME OF THE UNIT/MODULE					Botanical nomenclature						
TOTAL HOURS		6		THEORY		√		TUTORIAL		PRAC	
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/TOPIC							HR	TEACHER	MONTH	
1	Principles and rules (ICN)							1	AC	MAR	
2	Ranks and names and Binominal system							1	AC	MAR	
3	Typification							1	AC	MAR	
4	Author citation and rule of priority							1	AC	MAR	
5	Valid and effective publication							1	AC	MAR	
6	Class test							1	AC	MAR	
Total Hours							6				

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS and GENERAL)											
NAME OF THE DEPARTMENT					Botany						
HOD		DR. AYANA CHAKRABORTY									
INITIALS OF FACULTIES		DAY	AC	AB	SDG	SS	ABJ				
		MORN									
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020					HONS		GENERAL √	
			SEM		2	Core Course GE		2	CREDIT POINT		4
Name of the Course			PLANT ECOLOGY AND TAXONOMY								
Course Co-ordinator			DR. AYANA CHAKRABORTY								
TOTAL MARKS		50	TH	√	TUT			PRAC			
TOTAL HOURS		60	TH	√	TUT			PRAC			
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC					11						
NAME OF THE UNIT/MODULE					Classification						
TOTAL HOURS		6	THEORY		√	TUTORIAL			PRAC		
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/TOPIC						HR	TEACHER	MONTH		
1	Introduction and criteria of classification						1	SDG	APR		
2	Types of classification- artificial, natural and phylogenetic.						1	SDG	APR		
3	Merits and demerits of artificial, natural and phylogenetic classification						1	SDG	APR		
4	Bentham and Hooker (up to series),						1	AB	APR		
5	General idea of Cronquist's classification (1981).						1	AB	APR		
6	Comparison between Bentham and Hooker (up to series), and General idea of Cronquist's classification (1981).						1	SDG	MAY		
Total Hours						6					

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS and GENERAL)											
NAME OF THE DEPARTMENT					Botany						
HOD		DR. AYANA CHAKRABORTY									
INITIALS OF FACULTIES		DAY	AC	AB	SDG	SS	ABJ				
		MORN									
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020					HONS		GENERAL √	
			SEM		2	Core Course GE		2	CREDIT POINT		4
Name of the Course			PLANT ECOLOGY AND TAXONOMY								
Course Co-ordinator			DR. AYANA CHAKRABORTY								
TOTAL MARKS		50	TH	√	TUT			PRAC			
TOTAL HOURS		60	TH	√	TUT			PRAC			
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC					12						
NAME OF THE UNIT/MODULE					Numerical taxonomy and cladistics						
TOTAL HOURS		4	THEORY		√	TUTORIAL		PRAC			
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/TOPIC						HR	TEACHER	MONTH		
1	Characters						1	AC	MAR		
2	Variations and cluster analysis						1	AC	APR		
3	Phenograms and Cladograms (definitions and differences).						1	AC	APR		
4	Class test						1	AC	APR		
Total Hours						4					

SEM: 2(GE)

PRACTICAL

BOTHGEC02P(CREDIT: 2)

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS and GENERAL)											
NAME OF THE DEPARTMENT					Botany						
HOD		DR. AYANA CHAKRABORTY									
INITIALS OF FACULTIES		DAY	AC	AB	SDG	SS	ABJ				
		MORN									
PERIOD OF SEMESTER								HONS		GENERAL	
			FROM JANUARY 2020 TO JUNE 2020							√	
SEM		2	Core Course			2	CREDIT POINT		2	Course Code	BOTHGECO2P
			GE								
Name of the Course			PLANT ECOLOGY AND TAXONOMY								
Course Co-ordinator			DR. AYANA CHAKRABORTY								
TOTAL MARKS		25	TH				TUT			PRAC	√
TOTAL HOURS		60	TH				TUT			PRAC	√
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				1							
NAME OF THE UNIT/MODULE				PLANT ECOLOGY AND TAXONOMY							
TOTAL HOURS		60	THEORY				TUTORIAL			PRAC	√
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/TOPIC						HR	TEACHER	MONTH		
1	Study of Soil thermometer maximum and minimum thermometer.....its working principal and use						2	AB & SS	JANUARY		
2	Study of anemometer.....its working principal and use						2	AB & SS	FEBRUARY		
3	Study of psychrometer/hygrometer.....its working principal and use						2	AB & SS	FEBRUARY		
4	Study of rain gauge.....its working principal and use						2	AB & SS	FEBRUARY		
5	Study of lux meter.....its working principal and use						2	AB & SS	FEBRUARY		
6	Determination of soil pH through pH meter (two soil samples)						2	AB & SS	MARCH		
7	Determination of carbonate (two soil samples)						2	AB & SS	MARCH		
8	Determination of chlorides (two soil samples)						2	AB & SS	MARCH		
9	Determination of nitrates (two soil samples)						2	AB & SS	APRIL		
10	Determination of sulphates (two soil samples)						2	AB & SS	APRIL		
11	Determination of organic matter (two soil samples) by Rapid filtration test						2	AB & SS	APRIL		
12	Study of morphological adaptations of hydrophytes (<i>Nymphaea</i>)						2	AB & SS	MAY		
13	Study of morphological adaptations xerophytes (<i>Nerium</i> leaf)						2	AB & SS	MAY		
14	Study of biotic interactions of stem parasite (<i>Cuscuta</i>)						2	AC & SDG	JANUARY		

15	Study of biotic interactions of epiphytes (Orchid root)	2	AC & SDG	JANUARY
16	Determination of minimal quadrat size for the study of herbaceous vegetation	2	AC & SDG	JANUARY
17	Quantitative analysis of herbaceous vegetation in the college campus /suitable site for frequency and comparison with Raunkiaer's frequency distribution law	2	AC & SDG	JANUARY
18	Introduction to plant taxonomy, Bentham Hooker System, Bengal Plants, key preparation for identification of angiospermic plants.	2	AC & SDG	FEBRUARY
19	Study of vegetative and floral characters (Description, V.S. of flower, section of ovary, floral diagram/s, floral formula/e and systematic position according to Bentham & Hooker's system of classification) of Brassicaceae – <i>Nasturtium indicum</i> .	2	AC & SDG	FEBRUARY
20	Study of vegetative and floral characters (Description, V.S. of flower, section of ovary, floral diagram/s, floral formula/e and systematic position according to Bentham & Hooker's system of classification) of Asteraceae - <i>Eclipta</i>	2	AC & SDG	FEBRUARY
21	Study of vegetative and floral characters (Description, V.S. of flower, section of ovary, floral diagram/s, floral formula/e and systematic position according to Bentham & Hooker's system of classification) of Asteraceae - <i>Tridax</i>	2	AC & SDG	FEBRUARY
22	Study of vegetative and floral characters (Description, V.S. of flower, section of ovary, floral diagram/s, floral formula/e and systematic position according to Bentham & Hooker's system of classification) of Solanaceae– <i>Nicotiana glauca</i>	2	AC & SDG	MARCH
23	Study of vegetative and floral characters (Description, V.S. of flower, section of ovary, floral diagram/s, floral formula/e and systematic position according to Bentham & Hooker's system of classification) of Solanaceae– <i>Solanum nigrum</i>	2	AC & SDG	MARCH
24	Study of vegetative and floral characters (Description, V.S. of flower, section of ovary, floral diagram/s, floral formula/e and systematic position according to Bentham & Hooker's system of classification) of Lamiaceae - <i>Leonurus sibiricus</i>	2	AC & SDG	MARCH
25	Study of vegetative and floral characters (Description, V.S. of flower, section of ovary, floral diagram/s, floral formula/e and systematic position according to Bentham & Hooker's system of classification) of Lamiaceae - <i>Leucas aspera</i>	2	AC & SDG	MARCH
26	Study of vegetative and floral characters (Description, V.S. of flower, section of ovary, floral diagram/s, floral formula/e and systematic position according to Bentham & Hooker's system of classification) of Lamiaceae - <i>Ocimum sanctum</i>	2	AC & SDG	APR
27	Study of vegetative and floral characters (Description,	2	AC & SDG	APR

	V.S. of flower, section of ovary, floral diagram/s, floral formula/e and systematic position according to Bentham & Hooker's system of classification) of Liliaceae - <i>Allium</i> .			
28	Demonstration of Herbarium preparation	2	AC & SDG	APR
29	Practice class	2	AC & SDG	MAY
30	Practice class	2	AC & SDG	MAY
	TOTAL HOURS	60		

SEM: 4(DSC)

THEORY

BOTGCOR04T (CREDIT: 4)

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS)											
NAME OF THE DEPARTMENT					BOTANY						
HOD		DR. AYANA CHAKRAROBTY									
INITIALS OF FACULTIES		DAY	AC	AB	SDG	SS	ABJ				
		MORN									
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020				HONS		GENERAL		
									√		
SEM		4	Core Course		4			CREDIT POINT	4	Course Code	
			DSC							BOTGCOR04T	
Name of the Course			Plant Physiology and Metabolism								
Course Co-ordinator			DR. ARUNEEMA BARDHAN								
TOTAL MARKS	50		TH	√		TUT			PRAC		
TOTAL HOURS	60		TH	√		TUT			PRAC		
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				1							
NAME OF THE UNIT/MODULE				Plant-water relations							
TOTAL HOURS	8		THEORY	√		TUTORIAL			PRAC		
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/ TOPIC					HR	TEACHER	MONTH			
1	Introduction					1	AB	JAN			
2	Importance of water					1	AB	JAN			
3	water potential and its components					1	AB	JAN			
4	Transpiration and its significance					1	AB	FEB			
5	Factors affecting transpiration					1	AB	FEB			
6	Root pressure and guttation					1	AB	FEB			
7	Doubt Clearing Class					1	AB	FEB			
8	Class Test					1	AB	FEB			
TOTAL HOURS					8						

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS)											
NAME OF THE DEPARTMENT					BOTANY						
HOD		DR. AYANA CHAKRAROBTY									
INITIALS OF FACULTIES		DAY	AC	AB	SDG	SS	ABJ				
		MORN									
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020				HONS		GENERAL		
									√		
SEM		4	Core Course		4			CREDIT POINT	4	Course Code	BOTGCOR04T
DSC											
Name of the Course			Plant Physiology and Metabolism								
Course Co-ordinator			DR. ARUNEEMA BARDHAN								
TOTAL MARKS	50	TH	√	TUT		PRAC					
TOTAL HOURS	60	TH	√	TUT		PRAC					
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				2							
NAME OF THE UNIT/MODULE				Mineral nutrition							
TOTAL HOURS	8	THEORY	√	TUTORIAL		PRAC					
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/ TOPIC			HR	TEACHER	MONTH					
1	Introduction			1	SS	JAN					
2	Essential elements, macro and micronutrients			1	SS	JAN					
3	Criteria of essentiality of elements; Role of essential elements			1	SS	FEB					
4	Transport of ions across cell membrane			1	SS	FEB					
5	Active and passive transport			1	SS	FEB					
6	Carriers, channels and pumps			1	SS	FEB					
7	Doubt Clearing Class			1	SS	MARCH					
8	Class Test			1	SS	MARCH					
TOTAL HOURS				8							

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS)											
NAME OF THE DEPARTMENT					BOTANY						
HOD		DR. AYANA CHAKRAROBTY									
INITIALS OF FACULTIES		DAY	AC	AB	SDG	SS	ABJ				
		MORN									
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020				HONS		GENERAL √		
SEM		4	Core Course DSC		4			CREDIT POINT	4	Course Code	BOTGCOR04T
Name of the Course			Plant Physiology and Metabolism								
Course Co-ordinator			DR. ARUNEEMA BARDHAN								
TOTAL MARKS	50		TH	√		TUT			PRAC		
TOTAL HOURS	60		TH	√		TUT			PRAC		
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				3							
NAME OF THE UNIT/MODULE				Translocation in phloem							
TOTAL HOURS	6		THEORY	√		TUTORIAL			PRAC		
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/ TOPIC					HR	TEACHER	MONTH			
1	Introduction					1	AB	MARCH			
2	Composition of phloem sap					1	AB	MARCH			
3	Girdling experiment					1	AB	MARCH			
4	Pressure flow model					1	AB	MARCH			
5	Phloem loading and unloading					1	AB	APRIL			
6	Doubt Clearing Class					1	AB	APRIL			
TOTAL HOURS						6					

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS)												
NAME OF THE DEPARTMENT						BOTANY						
HOD		DR. AYANA CHAKRAROBTY										
INITIALS OF FACULTIES		DAY	AC	AB	SDG	SS	ABJ					
		MORN										
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020					HONS		GENERAL		
										√		
SEM		4	Core Course		5				CREDIT POINT	4	Course Code	BOTGCOR04T
			DSC									
Name of the Course			Plant Physiology and Metabolism									
Course Co-ordinator			DR. ARUNEEMA BARDHAN									
TOTAL MARKS	50		TH	√		TUT			PRAC			
TOTAL HOURS	60		TH	√		TUT			PRAC			
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				4								
NAME OF THE UNIT/MODULE				Photosynthesis								
TOTAL HOURS	12		THEORY	√		TUTORIAL			PRAC			
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)												
SL	LECTURE HEAD/ TOPIC						HR	TEACHER	MONTH			
1	Introduction						1	AC	JAN			
2	Photosynthetic Pigments (Chl a, b, xanthophylls, carotene)						1	AC	JAN			
3	Photosystem I and II						1	AC	JAN			
4	Reaction center, antenna molecules						1	AC	FEB			
5	Electron transport and mechanism of ATP synthesis						1	AC	FEB			
6	C ₃ pathway of carbon fixation						1	AC	FEB			
7	C ₄ pathway of carbon fixation						1	AC	FEB			
8	CAM pathway of carbon fixation						1	AC	MAR			
9	Photorespiration						1	AC	MAR			
10	Doubt Clearing Class						1	AC	MAR			
11	Doubt Clearing Class						1	AC	APR			
12	Class Test						1	AC	APR			
TOTAL HOURS							12					

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS)										
NAME OF THE DEPARTMENT					BOTANY					
HOD		DR. AYANA CHAKRAROBTY								
INITIALS OF FACULTIES		DAY	AC	AB	SDG	SS	ABJ			
		MORN								
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020				HONS		GENERAL	
									√	
SEM		4	Core Course		5				CREDIT POINT	4
			DSC						Course Code	BOTGCOR04T
Name of the Course			Plant Physiology and Metabolism							
Course Co-ordinator			DR. ARUNEEMA BARDHAN							
TOTAL MARKS	50		TH	√		TUT			PRAC	
TOTAL HOURS	60		TH	√		TUT			PRAC	
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC					5					
NAME OF THE UNIT/MODULE					Respiration					
TOTAL HOURS	6		THEORY	√		TUTORIAL			PRAC	
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)										
SL	LECTURE HEAD/ TOPIC					HR	TEACHER	MONTH		
1	Introduction					1	SS	MARCH		
2	Glycolysis					1	SS	MARCH		
3	Anaerobic respiration					1	SS	APR		
4	TCA cycle					1	SS	APR		
5	Oxidative phosphorylation, Glyoxylate mechanism					1	SS	APR		
6	Oxidative Pentose Phosphate Pathway					1	SS	APR		
TOTAL HOURS					6					

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS)												
NAME OF THE DEPARTMENT						BOTANY						
HOD		DR. AYANA CHAKRAROBTY										
INITIALS OF FACULTIES		DAY	AC	AB	SDG	SS	ABJ					
		MORN										
PERIOD OF SEMESTER		FROM JANUARY 2020 TO JUNE 2020						HONS		GENERAL		
										√		
SEM		4	Core Course		5				CREDIT POINT	4	Course Code	BOTGCOR04T
			DSC									
Name of the Course			Plant Physiology and Metabolism									
Course Co-ordinator			DR. ARUNEEMA BARDHAN									
TOTAL MARKS	50		TH	√		TUT				PRAC		
TOTAL HOURS	60		TH	√		TUT				PRAC		
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				6								
NAME OF THE UNIT/MODULE				Enzymes								
TOTAL HOURS	4		THEORY	√		TUTORIAL				PRAC		
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)												
SL	LECTURE HEAD/ TOPIC					HR	TEACHER	MONTH				
1	Structure and properties enzymes					1	AB	APRIL				
2	Mechanism of enzyme catalysis					1	AB	APRIL				
3	Enzyme inhibition					1	SS	APR				
4	Doubt Clearing Class					1	AB	MAY				
TOTAL HOURS						4						

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS)											
NAME OF THE DEPARTMENT					BOTANY						
HOD		DR. AYANA CHAKRAROBTY									
INITIALS OF FACULTIES		DAY	AC	AB	SDG	SS	ABJ				
		MORN									
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020				HONS		GENERAL		
									√		
SEM		4	Core Course		5			CREDIT POINT	4	Course Code	BOTGCOR04T
			DSC								
Name of the Course			Plant Physiology and Metabolism								
Course Co-ordinator			DR. ARUNEEMA BARDHAN								
TOTAL MARKS	50		TH	√		TUT			PRAC		
TOTAL HOURS	60		TH	√		TUT			PRAC		
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC			7								
NAME OF THE UNIT/MODULE			Nitrogen metabolism								
TOTAL HOURS	4		THEORY	√		TUTORIAL			PRAC		
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/ TOPIC					HR	TEACHER	MONTH			
1	Introduction					1	SDG	APR			
2	Biological nitrogen fixation;					1	SDG	APR			
3	Nitrate assimilation.					1	AC	APR			
4	Ammonia assimilation.					1	SDG	APR			
TOTAL HOURS						4					

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS)											
NAME OF THE DEPARTMENT					BOTANY						
HOD		DR. AYANA CHAKRAROBTY									
INITIALS OF FACULTIES		DAY	AC	AB	SDG	SS	ABJ				
		MORN									
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020				HONS		GENERAL		
									√		
SEM		4	Core Course		5			CREDIT POINT	4	Course Code	BOTGCOR04T
			DSC								
Name of the Course			Plant Physiology and Metabolism								
Course Co-ordinator			DR. ARUNEEMA BARDHAN								
TOTAL MARKS	50	TH	√	TUT		PRAC					
TOTAL HOURS	60	TH	√	TUT		PRAC					
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				8							
NAME OF THE UNIT/MODULE				Plant growth regulators							
TOTAL HOURS	6	THEORY	√	TUTORIAL		PRAC					
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/ TOPIC						HR	TEACHER	MONTH		
1	Introduction						1	SDG	JAN		
2	Discovery and physiological roles of auxins						1	SDG	JAN		
3	Discovery and physiological roles of gibberellins						1	SDG	JAN		
4	Discovery and physiological roles of cytokinins						1	SDG	FEB		
5	Discovery and physiological roles of ABA						1	SDG	FEB		
6	Discovery and physiological roles of ethylene.						1	SDG	FEB		
TOTAL HOURS						6					

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS)											
NAME OF THE DEPARTMENT					BOTANY						
HOD		DR. AYANA CHAKRAROBTY									
INITIALS OF FACULTIES		DAY	AC	AB	SDG	SS	ABJ				
		MORN									
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020				HONS		GENERAL		
									√		
SEM		4	Core Course		5			CREDIT POINT	4	Course Code	BOTGCOR04T
DSC											
Name of the Course			Plant Physiology and Metabolism								
Course Co-ordinator			DR. ARUNEEMA BARDHAN								
TOTAL MARKS	50	TH	√	TUT		PRAC					
TOTAL HOURS	60	TH	√	TUT		PRAC					
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				9							
NAME OF THE UNIT/MODULE				Plant response to light and temperature							
TOTAL HOURS	6	THEORY	√	TUTORIAL		PRAC					
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/ TOPIC						HR	TEACHER	MONTH		
1	Introduction						1	SDG	FEB		
2	Photoperiodism (SDP, LDP, Day neutral plants)						1	SDG	MAR		
3	Phytochrome (discovery and structure)						1	SDG	MAR		
4	Red and far red light responses on photomorphogenesis						1	SDG	MAR		
5	Vernalization						1	SDG	MAR		
6	Class Test						1	SDG	MAR		
TOTAL HOURS						6					

SEM: 4(DSC)

PRACTICAL

BOTGCOR04P (CREDIT: 4)

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS)										
NAME OF THE DEPARTMENT					BOTANY					
HOD		DR. AYANA CHAKRAROBTY								
INITIALS OF FACULTIES	DAY	AC	AB	SDG	SS	ABJ				
	MORN									
PERIOD OF SEMESTER		FROM JANUARY 2020 TO JUNE 2020				HONS		GENERAL √		
SEM		4	Core Course	4			CREDIT POINT	2	Course Code	BOTGCOR04P
	DSC									
Name of the Course			Plant Physiology and Metabolism							
Course Co-ordinator			DR. ARUNEEMA BARDHAN							
TOTAL MARKS	25	TH		TUT		PRAC	√			
TOTAL HOURS	60	TH		TUT		PRAC	√			
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC			1							
NAME OF THE UNIT/MODULE			PRACTICAL							
TOTAL HOURS	60	THEORY		TUTORIAL		PRAC	√			
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)										
SL	LECTURE HEAD/ TOPIC					HR	TEACHER	MONTH		
1	Determination of osmotic potential of plant cell sap by plasmolytic method using <i>Rhoeo</i> leaf					2	AB & SS	JAN		
2	Determination of osmotic potential of plant cell sap by plasmolytic method using <i>Basella</i> leaf					2	ABJ	JAN		
3	To study the effect of two environmental factors (light and wind) on transpiration by excised twig					2	ABJ	JAN		
4	To study the effect of two environmental factors (light and wind) on transpiration by excised twig-repeat class					2	AB & SS	JAN		
5	Calculation of stomatal index and stomatal frequency of a mesophyte					2	ABJ	JAN		
6	Calculation of stomatal index and stomatal frequency of a xerophyte					2	ABJ	FEB		
7	Class test and quiz					2	AB & SS	FEB		
8	Demonstration of activity of catalase					2	ABJ	FEB		
9	Study of effect of pH and enzyme concentration on activity of catalase					2	AB & SS	FEB		
10	Study of effect of bicarbonate concentration on O ₂ evolution in photosynthesis					2	ABJ	FEB		
11	Study of effect of bicarbonate concentration on O ₂ evolution in photosynthesis					2	AB & SS	FEB		
12	Comparison of the rate of respiration in any two					2	ABJ	FEB		

	parts of a plant (leaf and petals)			
13	Comparison of the rate of respiration in any two parts of a plant (leaf and stem)	2	AB & SS	FEB
14	Demonstration experiment: Effect of auxins on rooting in <i>Hibiscus</i>	2	ABJ	MAR
15	Demonstration experiment: Effect of auxins on rooting in <i>Tagetus</i>	2	AB & SS	MAR
16	Class test and quiz	2	AB & SS	MAR
17	Demonstration experiments: Suction due to transpiration.	2	ABJ	MAR
18	Demonstration experiments: R.Q. (using petals)	2	AB & SS	MAR
19	Demonstration experiments: R.Q. (using germinating seeds)	2	AB & SS	MAR
20	Demonstration experiment: Respiration in monocot roots.	2	ABJ	MAR
21	Demonstration experiment: Respiration in dicot roots.	2	AB & SS	APR
22	Practice class	2	AB & SS	APR
23	Practice Class	2	AB & SS	APR
24	Practice Class	2	ABJ	APR
25	Practice Class	2	AB & SS	APR
26	Practice class	2	ABJ	APR
27	Practice class	2	AB & SS	APR
28	Class test and viva	2	ABJ	MAY
29	Class test and viva	2	AB & SS	MAY
30	Practice class	2	ABJ	MAY
Total Hours		60		

SEM: 4 (GE)

THEORY

BOTHGECOR04T (CREDIT: 4)

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS)	
NAME OF THE DEPARTMENT	BOTANY

HOD		DR. AYANA CHAKRAROBTY										
INITIALS OF FACULTIES		DAY	AC	AB	SDG	SS	ABJ					
		MORN										
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020					HONS		GENERAL √		
SEM		4	Core Course		4				CREDIT POINT	4	Course Code	BOTHGEC04T
			GE									
Name of the Course			Plant Physiology and Metabolism									
Course Co-ordinator			DR. ARUNEEMA BARDHAN									
TOTAL MARKS	50		TH	√		TUT					PRAC	
TOTAL HOURS	60		TH	√		TUT					PRAC	
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC			1									
NAME OF THE UNIT/MODULE			Plant-water relations									
TOTAL HOURS	8		THEORY	√		TUTORIAL					PRAC	
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)												
SL	LECTURE HEAD/ TOPIC					HR	TEACHER	MONTH				
1	Introduction					1	AB	JAN				
2	Importance of water					1	AB	JAN				
3	water potential and its components					1	AB	JAN				
4	Transpiration and its significance					1	AB	FEB				
5	Factors affecting transpiration					1	AB	FEB				
6	Root pressure and guttation					1	AB	FEB				
7	Doubt Clearing Class					1	AB	FEB				
8	Class Test					1	AB	FEB				
TOTAL HOURS						8						

NAME OF THE DEPARTMENT				BOTANY								
HOD		DR. AYANA CHAKRAROBTY										
INITIALS OF FACULTIES		DAY	AC	AB	SDG	SS	ABJ					
		MORN										
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020						HONS		GENERAL	
											√	
SEM		4	Core Course		4				CREDIT POINT	4	Course Code	BOTHGEC04T
			GE									
Name of the Course			Plant Physiology and Metabolism									
Course Co-ordinator			DR. ARUNEEMA BARDHAN									
TOTAL MARKS	50		TH	√		TUT				PRAC		
TOTAL HOURS	60		TH	√		TUT				PRAC		
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC			2									
NAME OF THE UNIT/MODULE			Mineral nutrition									
TOTAL HOURS	8		THEORY	√		TUTORIAL				PRAC		
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)												
SL	LECTURE HEAD/ TOPIC						HR	TEACHER	MONTH			
1	Introduction						1	SS	JAN			
2	Essential elements, macro and micronutrients						1	SS	JAN			
3	Criteria of essentiality of elements; Role of essential elements						1	SS	FEB			
4	Transport of ions across cell membrane						1	SS	FEB			
5	Active and passive transport						1	SS	FEB			
6	Carriers, channels and pumps						1	SS	FEB			
7	Doubt Clearing Class						1	SS	MARCH			
8	Class Test						1	SS	MARCH			
TOTAL HOURS						8						

NAME OF THE DEPARTMENT				BOTANY							
HOD		DR. AYANA CHAKRAROBTY									
INITIALS OF FACULTIES		DAY	AC	AB	SDG	SS	ABJ				
		MORN									
PERIOD OF SEMESTER		FROM JANUARY 2020 TO JUNE 2020						HONS		GENERAL	
										√	
SEM		4	Core Course		4			CREDIT POINT	4	Course Code	BOTHGEC04T
			GE								
Name of the Course			Plant Physiology and Metabolism								
Course Co-ordinator			DR. ARUNEEMA BARDHAN								
TOTAL MARKS	50	TH	√	TUT		PRAC					
TOTAL HOURS	60	TH	√	TUT		PRAC					
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				3							
NAME OF THE UNIT/MODULE				Translocation in phloem							
TOTAL HOURS	6	THEORY	√	TUTORIAL		PRAC					
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/ TOPIC							HR	TEACHER	MONTH	
1	Introduction							1	AB	MARCH	
2	Composition of phloem sap							1	AB	MARCH	
3	Girdling experiment							1	AB	MARCH	
4	Pressure flow model							1	AB	MARCH	
5	Phloem loading and unloading							1	AB	APRIL	
6	Doubt Clearing Class							1	AB	APRIL	
TOTAL HOURS							6				

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS)											
NAME OF THE DEPARTMENT					BOTANY						
HOD		DR. AYANA CHAKRAROBTY									
INITIALS OF FACULTIES		DAY	AC	AB	SDG	SS	ABJ				
		MORN									
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020				HONS		GENERAL		
									√		
SEM		4	Core Course		5			CREDIT POINT	4	Course Code	BOTHGEC04T
			GE								
Name of the Course			Plant Physiology and Metabolism								
Course Co-ordinator			DR. ARUNEEMA BARDHAN								
TOTAL MARKS	50		TH	√		TUT			PRAC		
TOTAL HOURS	60		TH	√		TUT			PRAC		
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC			4								
NAME OF THE UNIT/MODULE			Photosynthesis								
TOTAL HOURS	12		THEORY	√		TUTORIAL			PRAC		
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/ TOPIC					HR	TEACHER	MONTH			
1	Introduction					1	AC	JAN			
2	Photosynthetic Pigments (Chl a, b, xanthophylls, carotene)					1	AC	JAN			
3	Photosystem I and II					1	AC	JAN			
4	Reaction center, antenna molecules					1	AC	FEB			
5	Electron transport and mechanism of ATP synthesis					1	AC	FEB			
6	C ₃ pathway of carbon fixation					1	AC	FEB			
7	C ₄ pathway of carbon fixation					1	AC	FEB			
8	CAM pathway of carbon fixation					1	AC	MAR			
9	Photorespiration					1	AC	MAR			
10	Doubt Clearing Class					1	AC	MAR			
11	Doubt Clearing Class					1	AC	APR			
12	Class Test					1	AC	APR			
TOTAL HOURS						12					

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS)											
NAME OF THE DEPARTMENT					BOTANY						
HOD		DR. AYANA CHAKRAROBTY									
INITIALS OF FACULTIES		DAY	AC	AB	SDG	SS	ABJ				
		MORN									
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020				HONS		GENERAL √		
SEM		4	Core Course GE		5			CREDIT POINT	4	Course Code	BOTHGEC04T
Name of the Course			Plant Physiology and Metabolism								
Course Co-ordinator			DR. ARUNEEMA BARDHAN								
TOTAL MARKS	50		TH	√	TUT			PRAC			
TOTAL HOURS	60		TH	√	TUT			PRAC			
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				5							
NAME OF THE UNIT/MODULE				Respiration							
TOTAL HOURS	6		THEORY	√	TUTORIAL			PRAC			
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/ TOPIC				HR	TEACHER	MONTH				
1	Introduction				1	SS	MARCH				
2	Glycolysis				1	SS	MARCH				
3	Anaerobic respiration				1	SS	APR				
4	TCA cycle				1	SS	APR				
5	Oxidative phosphorylation, Glyoxylate mechanism				1	SS	APR				
6	Oxidative Pentose Phosphate Pathway				1	SS	APR				
TOTAL HOURS					6						

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS)												
NAME OF THE DEPARTMENT						BOTANY						
HOD		DR. AYANA CHAKRAROBTY										
INITIALS OF FACULTIES		DAY	AC	AB	SDG	SS	ABJ					
		MORN										
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020					HONS		GENERAL		
										√		
SEM		4	Core Course		5			CREDIT POINT	4	Course Code	BOTHGEC04T	
			GE									
Name of the Course			Plant Physiology and Metabolism									
Course Co-ordinator			DR. ARUNEEMA BARDHAN									
TOTAL MARKS	50		TH	√		TUT			PRAC			
TOTAL HOURS	60		TH	√		TUT			PRAC			
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC												
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC			6									
NAME OF THE UNIT/MODULE			Enzymes									
TOTAL HOURS	4		THEORY	√		TUTORIAL			PRAC			
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)												
SL	LECTURE HEAD/ TOPIC					HR	TEACHER	MONTH				
1	Structure and properties enzymes					1	AB	APRIL				
2	Mechanism of enzyme catalysis					1	AB	APRIL				
3	Enzyme inhibition					1	SS	APR				
4	Doubt Clearing Class					1	AB	MAY				
TOTAL HOURS						4						

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS)										
NAME OF THE DEPARTMENT					BOTANY					
HOD		DR. AYANA CHAKRAROBTY								
INITIALS OF FACULTIES		DAY	AC	AB	SDG	SS	ABJ			
		MORN								
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020				HONS		GENERAL	
									√	
SEM		4	Core Course		5				CREDIT POINT	4
			GE						Course Code	BOTHGEC04T
Name of the Course			Plant Physiology and Metabolism							
Course Co-ordinator			DR. ARUNEEMA BARDHAN							
TOTAL MARKS	50	TH	√	TUT		PRAC				
TOTAL HOURS	60	TH	√	TUT		PRAC				
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				7						
NAME OF THE UNIT/MODULE				Nitrogen metabolism						
TOTAL HOURS	4	THEORY	√	TUTORIAL		PRAC				
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)										
SL	LECTURE HEAD/ TOPIC					HR	TEACHER	MONTH		
1	Introduction					1	SDG	APR		
2	Biological nitrogen fixation;					1	SDG	APR		
3	Nitrate assimilation.					1	AC	APR		
4	Ammonia assimilation.					1	SDG	APR		
TOTAL HOURS						4				

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS)												
NAME OF THE DEPARTMENT						BOTANY						
HOD		DR. AYANA CHAKRAROBTY										
INITIALS OF FACULTIES		DAY	AC	AB	SDG	SS	ABJ					
		MORN										
PERIOD OF SEMESTER		FROM JANUARY 2020 TO JUNE 2020						HONS		GENERAL		
										√		
SEM		4	Core Course		5				CREDIT POINT	4	Course Code	BOTHGEC04T
			GE									
Name of the Course			Plant Physiology and Metabolism									
Course Co-ordinator			DR. ARUNEEMA BARDHAN									
TOTAL MARKS	50		TH	√		TUT				PRAC		
TOTAL HOURS	60		TH	√		TUT				PRAC		
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				8								
NAME OF THE UNIT/MODULE				Plant growth regulators								
TOTAL HOURS	6		THEORY	√		TUTORIAL				PRAC		
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)												
SL	LECTURE HEAD/ TOPIC						HR	TEACHER	MONTH			
1	Introduction						1	SDG	JAN			
2	Discovery and physiological roles of auxins						1	SDG	JAN			
3	Discovery and physiological roles of gibberellins						1	SDG	JAN			
4	Discovery and physiological roles of cytokinins						1	SDG	FEB			
5	Discovery and physiological roles of ABA						1	SDG	FEB			
6	Discovery and physiological roles of ethylene.						1	SDG	FEB			
TOTAL HOURS						6						

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS)											
NAME OF THE DEPARTMENT					BOTANY						
HOD		DR. AYANA CHAKRAROBTY									
INITIALS OF FACULTIES		DAY	AC	AB	SDG	SS	ABJ				
		MORN									
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020					HONS		GENERAL	
										√	
SEM		4	Core Course	5			CREDIT POINT	4	Course Code	BOTHGEC04T	
			GE								
Name of the Course			Plant Physiology and Metabolism								
Course Co-ordinator			DR. ARUNEEMA BARDHAN								
TOTAL MARKS	50		TH	√		TUT			PRAC		
TOTAL HOURS	60		TH	√		TUT			PRAC		
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				9							
NAME OF THE UNIT/MODULE				Plant response to light and temperature							
TOTAL HOURS	6		THEORY	√		TUTORIAL			PRAC		
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/ TOPIC					HR	TEACHER	MONTH			
1	Introduction					1	SDG	FEB			
2	Photoperiodism (SDP, LDP, Day neutral plants)					1	SDG	MAR			
3	Phytochrome (discovery and structure)					1	SDG	MAR			
4	Red and far red light responses on photomorphogenesis					1	SDG	MAR			
5	Vernalization					1	SDG	MAR			
6	Class Test					1	SDG	MAR			
TOTAL HOURS						6					

SEM: 4 (GE)

PRACTICAL

BOTHGECOR04T (CREDIT: 2)

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS)											
NAME OF THE DEPARTMENT					BOTANY						
HOD		DR. AYANA CHAKRAROBTY									
INITIALS OF FACULTIES		DAY	AC	AB	SDG	SS	ABJ				
		MORN									
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020					HONS		GENERAL	
										√	
SEM		4	Core Course		4			CREDIT POINT	2	Course Code	BOTHGEC04P
			GE								
Name of the Course			Plant Physiology and Metabolism								
Course Co-ordinator			DR. ARUNEEMA BARDHAN								
TOTAL MARKS	25		TH			TUT			PRAC	√	
TOTAL HOURS	60		TH			TUT			PRAC	√	
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC					1						
NAME OF THE UNIT/MODULE					PRACTICAL						
TOTAL HOURS	60		THEORY			TUTORIAL			PRAC	√	
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/ TOPIC					HR	TEACHER	MONTH			
1	Determination of osmotic potential of plant cell sap by plasmolytic method using <i>Rhoeo</i> leaf					2	AB & SS	JAN			
2	Determination of osmotic potential of plant cell sap by plasmolytic method using <i>Basella</i> leaf					2	ABJ	JAN			
3	To study the effect of two environmental factors (light and wind) on transpiration by excised twig					2	ABJ	JAN			
4	To study the effect of two environmental factors (light and wind) on transpiration by excised twig-repeat class					2	AB & SS	JAN			
5	Calculation of stomatal index and stomatal frequency of a mesophyte					2	ABJ	JAN			
6	Calculation of stomatal index and stomatal frequency of a xerophyte					2	ABJ	FEB			
7	Class test and quiz					2	AB & SS	FEB			
8	Demonstration of activity of catalase					2	ABJ	FEB			
9	Study of effect of pH and enzyme concentration on activity of catalase					2	AB & SS	FEB			
10	Study of effect of bicarbonate concentration on O ₂ evolution in photosynthesis					2	ABJ	FEB			
11	Study of effect of bicarbonate concentration on O ₂ evolution in photosynthesis					2	AB & SS	FEB			

12	Comparison of the rate of respiration in any two parts of a plant (leaf and petals)	2	ABJ	FEB
13	Comparison of the rate of respiration in any two parts of a plant (leaf and stem)	2	AB & SS	FEB
14	Demonstration experiment: Effect of auxins on rooting in <i>Hibiscus</i>	2	ABJ	MAR
15	Demonstration experiment: Effect of auxins on rooting in <i>Tagetus</i>	2	AB & SS	MAR
16	Class test and quiz	2	AB & SS	MAR
17	Demonstration experiments: Suction due to transpiration.	2	ABJ	MAR
18	Demonstration experiments: R.Q. (using petals)	2	AB & SS	MAR
19	Demonstration experiments: R.Q. (using germinating seeds)	2	AB & SS	MAR
20	Demonstration experiment: Respiration in monocot roots.	2	ABJ	MAR
21	Demonstration experiment: Respiration in dicot roots.	2	AB & SS	APR
22	Practice class	2	AB & SS	APR
23	Practice Class	2	AB & SS	APR
24	Practice Class	2	ABJ	APR
25	Practice Class	2	AB & SS	APR
26	Practice class	2	ABJ	APR
27	Practice class	2	AB & SS	APR
28	Class test and viva	2	ABJ	MAY
29	Class test and viva	2	AB & SS	MAY
30	Practice class	2	ABJ	MAY
Total Hours		60		

SEMESTER :4

SEC (Ethnobotany)

BOTSSEC02M

NAME OF THE DEPARTMENT					BOTANY					
HOD		DR. AYANA CHAKRAROBTY								
INITIALS OF FACULTIES		DAY	AC	AB	SDG	SS	ABJ			
		MORN								
PERIOD OF SEMESTER			FROM JAN 2020 TO JUNE 2020				HONS √		GENERAL √	
SEM	4	SEC GE/DSC		2	CREDIT POINT		2	Course Code	BOTSSEC02M	
Name of the Course			Ethnobotany							
Course Co-ordinator			DR. AYANA CHAKRAROBTY							
TOTAL MARKS	25	TH	√	TUT		PRAC				
TOTAL HOURS	30	TH	√	TUT		PRAC				
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				1						
NAME OF THE UNIT/MODULE				Ethnobotany						
TOTAL HOURS	6	THEORY	√	TUTORIAL		PRAC				
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)										
SL	TOPIC				HR	TEACHER	MONTH			
1	Introduction, concept, scope and objectives of Ethnobotany and Ethnobotany as an interdisciplinary science.				1	AC	JAN			
2	The relevance of ethnobotany in the present context.				1	AC	JAN			
3	Major and minor ethnic groups or Tribals of India, and their life styles.				1	AC	JAN			
4	Plants used by the tribals: Food plants.				1	AC	FEB			
5	Plants used by the tribals: intoxicants and beverages.				1	AC	FEB			
6	Plants used by the tribals: Resins and oils and miscellaneous uses.				1	AC	FEB			
	TOTAL HOURS				6					

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS and GENERAL)

NAME OF THE DEPARTMENT					BOTANY					
HOD		DR. AYANA CHAKRAROBTY								
INITIALS OF FACULTIES		DAY	AC	AB	SDG	SS	ABJ			
		MORN								
PERIOD OF SEMESTER			FROM JAN 2020 TO JUNE 2020				HONS √		GENERAL √	
SEM	4	SEC GE/DSC		2	CREDIT POINT	2	Course Code	BOTSSEC02M		
Name of the Course			Ethnobotany							
Course Co-ordinator			DR. AYANA CHAKRAROBTY							
TOTAL MARKS	25	TH	√	TUT		PRAC				
TOTAL HOURS	30	TH	√	TUT		PRAC				
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				1						
NAME OF THE UNIT/MODULE				Methodology of Ethnobotanical studies						
TOTAL HOURS	6	THEORY	√	TUTORIAL		PRAC				
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)										
SL	TOPIC					HR	TEACHER	MONTH		
1	Field work					1	ABJ	JAN		
2	Herbarium					1	ABJ	JAN		
3	Ancient Literature					1	ABJ	JAN		
4	Archaeological findings					1	ABJ	FEB		
5	Temples and sacred places.					1	ABJ	FEB		
6	Role of ethnic groups in conservation of plant genetic resources. Endangered taxa and forest management (participatory forest management).					1	ABJ	FEB		
	TOTAL HOURS					6				

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS and GENERAL)											
NAME OF THE DEPARTMENT						BOTANY					
HOD		DR. AYANA CHAKRAROBTY									
INITIALS OF FACULTIES		DAY	AC	AB	SDG	SS	ABJ				
		MORN									
PERIOD OF SEMESTER			FROM JAN 2020 TO JUNE 2020					HONS√		GENERAL√	
SEM	4	SEC		2		CREDIT POINT	2	Course Code	BOTSSEC02M		
		GE/DSC									
Name of the Course			Ethnobotany								
Course Co-ordinator			DR. AYANA CHAKRAROBTY								
TOTAL MARKS		25	TH	√	TUT			PRAC			
TOTAL HOURS		30	TH	√	TUT			PRAC			
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC					1						
NAME OF THE UNIT/MODULE					Ethnobotany						
TOTAL HOURS		10	THEORY	√	TUTORIAL			PRAC			
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
S L	TOPIC						HR	TEACHER	MONTH		
1	Medico-ethnobotanical sources in India;						1	ABJ	FEB		
2	Significance of ethno botanical practices of Azadiractha indica (along with their habitat and morphology)						1	ABJ	FEB		
3	Significance of ethno botanical practices of Ocimum sanctum (along with their habitat and morphology)						1	ABJ	MAR		
4	Significance of ethno botanical practices of Vitex negundo (along with their habitat and morphology)						1	ABJ	MAR		
5	Significance of ethno botanical practices of Gloriosa superba (along with their habitat and morphology)						1	ABJ	MAR		
6	Significance of ethno botanical practices of Tribulus terrestris (along with their habitat and morphology)						1	ABJ	MAR		
7	Significance of ethno botanical practices of Pongamia pinnata (along with their habitat and morphology)						1	ABJ	APR		
8	Significance of ethno botanical practices of Cassia auriculata (along with their habitat and morphology)						1	ABJ	APR		
9	Significance of ethno botanical practices of Indigofera tinctoria (along with their habitat and morphology)						1	ABJ	APR		
10	Role of ethnobotany in modern medicine with special example Rauwolfia sepentina, Trichopus zeylanicus, Artemisia, Withania						1	ABJ	MAY		
TOTAL HOURS						10					

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS and GENERAL)												
NAME OF THE DEPARTMENT						BOTANY						
HOD		DR. AYANA CHAKRAROBTY										
INITIALS OF FACULTIES		DAY	AC	AB	SDG	SS	ABJ					
		MORN										
PERIOD OF SEMESTER			FROM JAN 2020 TO JUNE 2020						HONS √		GENERAL √	
SEM	4	SEC GE/DSC			2		CREDIT POINT	2	Course Code	BOTSSEC02M		
Name of the Course				Ethnobotany								
Course Co-ordinator				DR. AYANA CHAKRAROBTY								
TOTAL MARKS	25	TH	√	TUT		PRAC						
TOTAL HOURS	30	TH	√	TUT		PRAC						
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				1								
NAME OF THE UNIT/MODULE				Ethnobotany								
TOTAL HOURS	8	THEORY	√	TUTORIAL		PRAC						
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)												
SL	TOPIC							HR	TEACHER	MONTH		
1	Ethnobotany as a tool to protect interests of ethnic groups.							1	AC	FEB		
2	Sharing of wealth concept with few examples from India.							1	AC	FEB		
3	Significance of Biopiracy							1	AC	MAR		
4	Intellectual Property Rights							1	AC	MAR		
5	Traditional Knowledge							1	AC	MAR		
6	Doubt clearing class							1	AC	MAR		
7	Doubt clearing class							1	AC	APR		
8	Quiz							1	AC	APR		
	TOTAL HOURS							8				