

SEMESTER :2

THEORY

BOTACOR03T (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		FROM JANUARY 2020 TO JUNE 2020					HONS		GENERAL	
							√			
SEM	2	Core Course			3	CREDIT POINT	4	Course Code	BOTACOR03T	
		GE/DSC								
Name of the Course			Mycology and Phytopathology							
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 to true fungi						
TOTAL HOURS	6	THEORY	√	TUTORIAL		PRAC				
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)										
SL	LECTURE HEAD/TOPIC						HR	TEACHER	MONTH	
1	General characteristics						1	AC	JAN	
2	Affinities with plants and animals						1	AC	JAN	
3	Thallus organization; cell wall composition and nutrition						1	AC	JAN	
4	Sexual (with reference to sporocarp) reproduction						1	AC	JAN	
5	Asexual (spore forming bodies in deuteromycetes) reproduction						1	AC	JAN	
6	Classification (Hawksworth <i>et al</i> 1995).						1	AC	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	AB	SDG	SS	ABJ				
		MORN									
PERIOD OF SEMESTER		FROM JANUARY 2020 TO JUNE 2020						HONS		GENERAL	
								√			
SEM	2	Core Course		3	CREDIT POINT		4	Course Code	BOTACOR03T		
		GE/DSC									
Name of the Course			Mycology and Phytopathology								
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				Chytridiomycota and Zygomycota							
TOTAL HOURS	5	THEORY		√	TUTORIAL			PRAC			
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/TOPIC						HR	TEACHER	MONTH		
1	Characteristic features						1	AC	JAN		
2	Ecology and significance; thallus organisation;						1	AC	JAN		
3	Reproduction						1	AC	JAN		
4	Life cycle with reference to Synchytrium						1	AC	JAN		
5	Life cycle with reference to Rhizopus.						1	AC	FEB		

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/DSC			3	CREDIT POINT	4	Course Code	BOTACOR03T	
Name of the Course			Mycology and Phytopathology							
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				Ascomycota						
TOTAL HOURS	10	THEORY		√	TUTORIAL			PRAC		
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)										
SL	LECTURE HEAD/TOPIC					HR	TEACHER	MONTH		
1	General characteristics (asexual and sexual fruiting bodies)					1	AC	FEB		
2	Ecology					1	AC	FEB		
3	Heterokaryosis and parasexuality					1	AC	FEB		
4	Life cycle of <i>Saccharomyces</i>					1	AC	FEB		
5	Life cycle of <i>Aspergillus</i>					1	AC	FEB		
6	Life cycle of <i>Penicillium</i>					1	AC	FEB		
7	Life cycle of <i>Alternaria</i>					1	AC	FEB		
8	Life cycle of <i>Neurospora</i>					1	AC	FEB		
9	Life cycle of <i>Ascobolus</i>					1	AC	FEB		
10	Doubt Clearing Class					1	AC	FEB		

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/DSC			3	CREDIT POINT	4	Course Code	BOTACOR03T		
Name of the Course			Mycology and Phytopathology								
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				Basidiomycota							
TOTAL HOURS	8	THEORY	√	TUTORIAL		PRAC					
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/TOPIC						HR	TEACHER	MONTH		
1	General characteristics						1	AC	FEB		
2	ecology						1	AC	FEB		
3	Life cycle of Black stem rust of wheat <i>Puccinia</i> (physiological specialization),						1	AC	FEB		
4	Life cycle of Loose and covered smut (symptoms only),						1	AC	MAR		
5	Life cycle of <i>Agaricus</i>						1	AC	MAR		
6	Bioluminescence						1	AC	MAR		
7	Fairy rings						1	AC	MAR		
8	Mushroom cultivation (general account).						1	AC	MAR		
9	Mushroom cultivation (details).						1	AC	MAR		
10	Class test						1	AC	MAR		

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		3	CREDIT POINT		4	Course Code	BOTACOR03T		
		GE/DSC									
Name of the Course			Mycology and Phytopathology								
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				Allied Fungi							
TOTAL HOURS	3	THEORY	√	TUTORIAL		PRAC					
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/TOPIC						HR	TEACHER	MONTH		
1	General characteristics						1	AC	MAR		
2	Status of slime molds; occurrence						1	AC	MAR		
3	Types of plasmodia; types of fruiting bodies.						1	AC	MAR		

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/DSC			3	CREDIT POINT		4	Course Code	BOTACOR03T	
Name of the Course			Mycology and Phytopathology								
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				Oomycota							
TOTAL HOURS	4	THEORY		√	TUTORIAL			PRAC			
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/TOPIC					HR	TEACHER	MONTH			
1	General characteristics					1	AC	MAR			
2	Ecology					1	AC	MAR			
3	Life cycle and classification of <i>Phytophthora</i>					1	AC	MAR			
4	Life cycle and classification of <i>Albugo</i>					1	AC	MAR			

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/DSC		3	CREDIT POINT	4	Course Code	BOTACOR03T			
Name of the Course			Mycology and Phytopathology								
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				Symbiotic associations							
TOTAL HOURS	4	THEORY	√	TUTORIAL			PRAC				
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/TOPIC						HR	TEACHER	MONTH		
1	Lichen: Occurrence and general characteristics; growth forms and range of thallus organization						1	AC	APR		
2	Lichen: Nature of associations of algal and fungal partners; reproduction						1	AC	APR		
3	Mycorrhiza: ectomycorrhiza and endomycorrhiza and						1	AC	APR		
4	Mycorrhiza: significance.						1	AC	APR		

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			3	CREDIT POINT		4	Course Code	BOTACOR03T	
		GE/DSC									
Name of the Course			Mycology and Phytopathology								
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				Applied Mycology							
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	AC	APR		
2	Role of fungi in biotechnology;.						1	AC	APR		
3	Application of fungi in food industry (flavour& texture, fermentation, baking, organic acids, enzymes, mycoproteins);						1	AC	APR		
4	Secondary metabolites (pharmaceutical preparations);						1	AC	APR		
5	Agriculture (biofertilizers);						1	AC	APR		
6	Mycotoxins;						1	AC	APR		
7	Biological control (mycofungicides, mycoherbicides, mycoinsecticides, myconematicides);						1	AC	APR		
8	Medical mycology						1	AC	MAY		
9	Doubt clearing class						1	AC	MAY		
10	Class test						1	AC	MAY		

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			3	CREDIT POINT		4	Course Code	BOTACOR03T	
		GE/DSC									
Name of the Course			Mycology and Phytopathology								
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				Phytopathology							
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	AC	MAY		
2	Terms and concepts						1	AC	MAY		
3	General symptoms; geographical distribution of diseases; etiology; symptomology						1	AC	MAY		
4	Host-pathogen relationships; disease cycle and environmental relation						1	AC	MAY		
5	Prevention and control of plant disease and role of quarantine.						1	AC	MAY		
6	Bacterial diseases – Citrus canker and Viral diseases – Tobacco Mosaic virus, vein clearing						1	AC	MAY		
7	Fungal and Oomycete diseases – Early and Late blight of potato						1	AC	MAY		
8	Black stem rust of wheat						1	AC	MAY		
9	Blast of Rice						1	AC	MAY		
10	Class test						1	AC	MAY		

SEMESTER :2

PRACTICAL

BOTACOR03P(CREDIT: 2)

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS)												
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		3				CREDIT POINT	2	Course Code	BOTACOR03P	
Name of the Course			Mycology and Phytopathology									
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				PRACTICAL								
TOTAL HOURS		2	THEORY				TUTORIAL				PRAC	√
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)												
SL	LECTURE HEAD/TOPIC						HR	TEACHER	MONTH			
1	Unicellular, coenocytic/septate mycelium through permanent slides						2	AC	JAN			
2	Ascocarp & basidiocarps through permanent slides						2	AC	JAN			
3	Micrometry-standardisation: introduction to stage and ocular micrometer						2	AC	JAN			
4	Standardisation under low power objectives (10x)						2	AC	JAN			
5	Standardisation under high power objectives (45x)						2	AC	JAN			
6	<i>Rhizopus</i> - study of asexual stage from temporary mounts and sexual structures through permanent slides						2	AC	JAN			
7	<i>Rhizopus</i> - study of sexual structures through						2	AC	JAN			

	permanent slides			
8	<i>Aspergillus</i> - study of asexual stage from temporary mounts and sexual stage from permanent slides/photographs	2	AC	FEB
9	<i>Penicillium</i> : study of asexual stage from temporary mounts and sexual stage from permanent slides/photographs	2	AC	FEB
10	Class test	2	AC	FEB
11	<i>Ascobolus</i> - sectioning through ascocarp and micrometry	2	AC	FEB
12	<i>Ascobolus</i> - sectioning and micrometry(measurement of ascus and ascospores)	2	AC	FEB
13	<i>Alternaria</i> - study of Specimens/photographs	2	AC	FEB
14	<i>Alternaria</i> - study by temporary mounts	2	AC	FEB
15	<i>Puccinia</i> - Herbarium specimens of Black Stem Rust of Wheat and infected Barberry leaves;	2	AC	MAR
16	<i>Puccinia</i> - sections/ mounts of spores on wheat and permanent slides of both the hosts	2	AC	MAR
17	<i>Agaricus</i> - Specimens of button stage and full grown mushroom;Exhibition of fairy rings and bioluminescent mushrooms	2	AC	MAR
18	<i>Agaricus</i> - Sectioning of gills of <i>Agaricus</i>	2	AC	MAR
19	<i>Albugo</i> - Study of symptoms of plants infected with <i>Albugo</i> (white rust of Amaranthus)	2	AC	MAR
20	<i>Albugo</i> -asexual phase study through section/temporary mounts and sexual structures through permanent slides.	2	AC	MAR
21	Class test on micrometry	2	AC	MAR
22	Study of growth forms of lichens (crustose, foliose and fruticose) on different substrates.	2	AC	APR
23	Mycorrhizae: ectomycorrhiza and endomycorrhiza (Photographs)	2	AC	APR
24	Class test	2	AC	APR
25	Phytopathology: Herbarium specimens of bacterial	2	AC	APR

	diseases; Citrus canker			
26	Viral diseases: TMV, Vein clearing symptom from any available specimen;	2	AC	APR
27	Fungal diseases: Early and Late blight of potato, Black stem rust of wheat and Blast of Rice.	2	AC	MAY
28	Black stem rust of wheat and Blast of Rice.	2	AC	MAY
29	Class test & viva	2	AC	MAY
30	Practice class and feed back	2	AC	MAY
Total		60		

SEMESTER :2

THEORY

BOTACOR04T(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		FROM JANUARY 2020 TO JUNE 2020					HONS		GENERAL	
							√			
SEM		2	Core Course GE/DSC			4	CREDIT POINT	4	Course Code	BOTACOR04T
Name of the Course			Archegoniate							
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	4	THEORY	√	TUTORIAL			PRAC			
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)										
SL	LECTURE HEAD/TOPIC						HR	TEACHER	MONTH	
1	Introduction						1	ABJ	JAN	
2	Unifying features of archegoniate						1	ABJ	FEB	
3	Transition to land habit						1	ABJ	FEB	
4	Alternation of generations.						1	ABJ	FEB	

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/DSC			4	CREDIT POINT	4	Course Code	BOTACOR04T
Name of the Course			Archegoniate							
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				Bryophytes						
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	General characteristics						1	SDG	JAN	
3	Adaptations to land habit						1	SDG	JAN	
4	Classification Proskauer 1954(up to class);						1	SDG	FEB	
5	Discussion about three different classes						1	SDG	FEB	
6	Range of thallus organization						1	SDG	FEB	

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/DSC			4	CREDIT POINT	4	Course Code	BOTACOR04T
Name of the Course			Archegoniate							
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				Type Studies- Bryophytes						
TOTAL HOURS	12	THEORY	√	TUTORIAL			PRAC			
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)										
SL	LECTURE HEAD/TOPIC					HR	TEACHER	MONTH		
1	Systematic position, morphology, anatomy and reproduction of <i>Riccia</i>					1	SDG	FEB		
2	Systematic position, morphology, anatomy and reproduction of <i>Marchantia</i>					1	SDG	MAR		
3	Systematic position, morphology, anatomy and reproduction of <i>Pellia</i>					1	SDG	MAR		
4	Systematic position, morphology, anatomy and reproduction of <i>Porella</i>					1	SDG	MAR		
5	Systematic position, morphology, anatomy and reproduction of <i>Anthoceros</i>					1	SDG	APR		
6	Systematic position, morphology, anatomy and reproduction of <i>Sphagnum</i>					1	SDG	APR		
7	Systematic position, morphology, anatomy and reproduction of <i>Funaria</i>					1	SDG	APR		
8	Reproduction trends in <i>Riccia</i> , <i>Marchantia</i> , <i>Anthoceros</i> and <i>Funaria</i>					1	ABJ	APR		
9	Evolutionary trends in <i>Riccia</i> , <i>Marchantia</i> , <i>Anthoceros</i> and <i>Funaria</i> (Gametophyte)					1	ABJ	APR		
10	Evolutionary trends in <i>Riccia</i> , <i>Marchantia</i> , <i>Anthoceros</i> and <i>Funaria</i> (Sporophyte)					1	ABJ	MAY		
11	Ecological importance of bryophytes with special reference to <i>Sphagnum</i>					1	SDG	APR		
12	Economic importance of bryophytes with special reference to <i>Sphagnum</i>					1	SDG	MAY		

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/DSC			4	CREDIT POINT	4	Course Code BOTACOR04T
Name of the Course			Archegoniate								
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				Pteridophytes							
TOTAL HOURS	06	THEORY	√	TUTORIAL		PRAC					
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/TOPIC						HR	TEACHER	MONTH		
1	Introduction						1	ABJ	FEB		
2	General characteristics						1	ABJ	MAR		
3	classification, Sporne 1975 (up to Class)						1	ABJ	MAR		
4	early land plants <i>Cooksonia</i>						1	ABJ	MAR		
5	early land plants <i>Rhynia</i>						1	ABJ	MAR		
6	Class test						1	ABJ	APR		

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/DSC			4	CREDIT POINT	4	Course Code	BOTACOR04T
Name of the Course			Archegoniate							
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				Type Studies- Pteridophytes						
TOTAL HOURS	14	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	Systematic position, morphology, anatomy and reproduction of <i>Psilotum</i> ,						1	SS	JAN	
3	Systematic position, morphology, anatomy and reproduction of <i>Selaginella</i> ,						1	SS	JAN	
4	Systematic position, morphology, anatomy and reproduction of <i>Equisetum</i>						1	SS	FEB	
5	Systematic position, morphology, anatomy and reproduction of <i>Pteris</i>						1	SS	FEB	
6	Apogamy						1	SS	FEB	
7	Apospory						1	SS	FEB	
8	Homospory and Heterospory						1	SS	MAR	
9	Seed habit						1	SS	MAR	
10	Telome theory						1	SS	MAR	
11	Stelar evolution						1	SS	MAR	
12	ecological importance						1	SS	APR	
13	Economic importance						1	SS	APR	
14	Class test						1	SS	APR	

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/DSC				4	CREDIT POINT	4	Course Code	BOTACOR04T
Name of the Course			Archegoniate								
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				Gymnosperms							
TOTAL HOURS	18	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 characteristics					1	AB	FEB			
3	classification (Sporne up to family)					1	AB	FEB			
4	Morphology, anatomy of <i>Cycas</i>					1	AB	FEB			
5	Reproduction of <i>Cycas</i>					1	AB	FEB			
6	Alternation of generation in <i>Cycas</i>					1	AB	MAR			
7	Doubt clearing Class					1	AB	MAR			
8	Morphology, anatomy of <i>Pinus</i>					1	AB	MAR			
9	Reproduction of <i>Pinus</i>					1	AB	MAR			
10	Alternation of generation in <i>Pinus</i>					1	AB	APR			
11	Doubt clearing class					1	AB	APR			
12	Morphology, anatomy of <i>Gnetum</i>					1	AB	APR			
13	Reproduction of <i>Gnetum</i>					1	AB	APR			
14	Alternation of generation in <i>Gnetum</i>					1	AB	MAY			
15	Doubt clearing class					1	AB	MAY			
16	ecological importance					1	ABJ	MAY			
17	Economic importance					1	ABJ	MAY			
18	Class test					1	AB	MAY			

SEMESTER :2

PRACTICAL

BOTACOR04P(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	
							√		L	
SEM		2	Core Course		4		CREDIT POINT	2	Course Code	BOTACOR04P
Name of the Course			Archegoniate							
Course Co-ordinator			DR. ARUNEEMA BARDHAN							
TOTAL MARKS	25		TH			TUT			PRAC	√
TOTAL HOURS	60		TH			TUT			PRAC	√
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC										
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	<i>Riccia</i> – Morphology of thallus					2	AB	JAN		
2	<i>Marchantia</i> - Morphology of thallus, whole mount of rhizoids & scales, vertical section of thallus through gemma cup, whole mount of gemmae (all temporary slides)					2	SS	JAN		
3	<i>Marchantia</i> - vertical section of thallus through gemma cup, whole mount of gemmae (all temporary slides)					2	SS	JAN		
4	<i>Marchantia</i> - Vertical section of antheridiophore, archegoniophore, longitudinal section of sporophyte (all permanent slides)					2	AB	JAN		
5	Practice Class					2	AB	FEB		
6	<i>Anthoceros</i> - Introduction, Morphology of thallus, Dissection of sporophyte (to show stomata, spores, pseudocelaters, columella), vertical section of thallus (all permanent slide).					2	SS	FEB		
7	<i>Sphagnum</i> - Morphology of plant, whole mount of leaf (permanent slide only)					2	AB	FEB		
8	Practice Class					2	SS	FEB		
9	<i>Funaria</i> - Morphology, whole mount of leaf, rhizoids, operculum, peristome, annulus, spores,					2	AB	FEB		
10	<i>Funaria</i> - Longitudinal section of capsule (temporary slides); permanent slides showing antheridial and archegonial heads					2	SS	FEB		
11	Practice Class						AB	FEB		
12	<i>Psilotum</i> - Study of specimen, transverse section of synangium (permanent slide)					2	SS	FEB		
13	<i>Selaginella</i> - Morphology, whole mount of leaf with ligule, transverse section of stem (permanent slide).					2	AB	MAR		
14	<i>Selaginella</i> - whole mount of strobilus, Whole mount of					2	SS	MAR		

	microsporophyll and megasporophyll (temporary slides), longitudinal section of strobilus (permanent slide).			
15	Practical class test and viva	2	AB	MAR
16	<i>Equisetum</i> - Morphology, transverse section of internode, longitudinal section of strobilus (temporary slide).	2	SS	MAR
17	<i>Equisetum</i> - MTransverse section of strobilus, whole mount of sporangiophore, whole mount of spores (temporary slide).		AB	MAR
18	<i>Pteris</i> - Morphology, vertical section of sporophyll, whole mount of sporangium, whole mount of spores (temporary slides),	2	SS	MAR
19	Practice Class	2	AB	MAR
20	<i>Cycas</i> - Morphology and TS of leaflet(temporary slides)	2	SS	MAR
21	<i>Cycas</i> - Morphology and TS of leaflet, morphology of microsporophyll and megasporophyll(temporary slides)	2	AB	APR
22	<i>Cycas</i> - whole mount of spore (temporary slides) ; TS of coralloid root, LS of ovule (all permanent slide).	2	AB	APR
23	<i>Pinus</i> - Morphology of long and dwarf shoots , male and female cones	2	AB	APR
24	<i>Pinus</i> - Transverse section of needle leaf (temporary slide),		SS	APR
25	<i>Pinus</i> - LS of male cone and female cone (permanent slide);microspores(permanent slides)	2	AB	APR
26	Practice Class	2	SS	APR
27	<i>Gnetum</i> - Morphology (shoot, male & female cones), VS of ovule (permanent slide).	2	AB	APR
28	One Botanical excursion to an appropriate location (with provision of fund from college).	2	SS	APR
29	Discussion about Field Note Book	2	AB	MAY
30	PRACTICE CLASS	2	AB	MAY

SEMESTER :4

THEORY

BOTACOR08T(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	8			CREDIT POINT	4	Course Code	BOTACOR08T	
Name of the Course			Molecular Biology								
Course Co-ordinator			DR. AYANA CHAKRAROBTY								
TOTAL MARKS	50		TH	√		TUT			PRAC		
TOTAL HOURS	60		TH	√		TUT			PRAC		
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				1							
NAME OF THE UNIT/MODULE				Nucleic acids: Carriers of genetic information							
TOTAL HOURS	4		THEORY	√		TUTORIAL			PRAC		
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/ TOPIC						HR	TEACHER	MONTH		
1	DNA as the carrier of genetic information (Griffith's experiment).						1	SDG	JANUARY		
2	Experiment of Hershey & Chase supporting DNA as the carrier of genetic information						1	SDG	JANUARY		
3	DNA as the carrier of genetic information (Experiment of McLeod & McCarty)						1	SDG	JANUARY		
4	Experiment of Fraenkel-Conrat supporting DNA as the carrier of genetic information and inference						1	SDG	JANUARY		
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		8				CREDIT POINT	4	Course Code	BOTACOR08T
Name of the Course			Molecular Biology									
Course Co-ordinator			DR. AYANA CHAKRAROBTY									
TOTAL MARKS	50		TH	√		TUT			PRAC			
TOTAL HOURS	60		TH	√		TUT			PRAC			
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				2								
NAME OF THE UNIT/MODULE				The Structures of DNA and RNA / Genetic Material								
TOTAL HOURS	10		THEORY	√		TUTORIAL			PRAC			
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)												
SL	LECTURE HEAD/ TOPIC					HR	TEACHER	MONTH				
1	DNA Structure: Watson and Crick - historic perspective					1	SDG	JANUARY				
2	DNA structure, salient features of double helix					1	SDG	JANUARY				
3	Types of DNA, types of genetic material					1	SDG	FEBUARY				
4	Denaturation and renaturation, cot curves					1	SDG	FEBUARY				
5	Organization of DNA- prokaryotes, viruses, eukaryotes					1	SDG	FEBUARY				
6	RNA structure					1	SDG	FEBUARY				
7	Organelle DNA -mitochondria and chloroplast DNA					1	SDG	FEBUARY				
8	The nucleosome					1	SDG	FEBUARY				
9	Chromatin structure- euchromatin, heterochromatin					1	SDG	FEBUARY				
10	Constitutive and facultative heterochromatin					1	SDG	FEBUARY				
TOTAL HOURS					10							

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		8			CREDIT POINT	4	Course Code	BOTACOR08T
Name of the Course			Molecular Biology								
Course Co-ordinator			DR. AYANA CHAKRAROBTY								
TOTAL MARKS	50	TH	√	TUT		PRAC					
TOTAL HOURS	60	TH	√	TUT		PRAC					
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				3							
NAME OF THE UNIT/MODULE				The replication of DNA							
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	SDG	FEBUARY		
2	Chemistry of DNA synthesis (Kornberg's discovery)						1	SDG	FEBUARY		
3	DNA: general principles of bidirectional, semi conservative and semi discontinuous replication						1	SDG	FEBUARY		
4	RNA priming						1	SDG	MARCH		
5	Various models of DNA replication, including rolling circle						1	SDG	MARCH		
6	⊕ (theta) mode of replication						1	SDG	MARCH		
7	Replication of linear ds-DNA						1	SDG	MARCH		
8	Replication of the 5' end of linear chromosome						1	SDG	MARCH		
9	Enzymes involved in DNA replication						1	SDG	MARCH		
10	Doubt clearing class						1	SDG	MARCH		
TOTAL HOURS						10					

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	8			CREDIT POINT	4	Course Code	BOTACOR08T	
Name of the Course			Molecular Biology								
Course Co-ordinator			DR. AYANA CHAKRAROBTY								
TOTAL MARKS	50	TH	√	TUT		PRAC					
TOTAL HOURS	60	TH	√	TUT		PRAC					
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				4							
NAME OF THE UNIT/MODULE				Central dogma and genetic code							
TOTAL HOURS	2	THEORY	√	TUTORIAL		PRAC					
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/ TOPIC						HR	TEACHER	MONTH		
1	Key experiments establishing-the central dogma (adaptor hypothesis and discovery of mRNA template),						1	SDG	MARCH		
2	Genetic code: salient features and deciphering (triplete binding assay).						1	SDG	MARCH		
TOTAL HOURS						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		8				CREDIT POINT	4	Course Code	BOTACOR08T
Name of the Course			Molecular Biology									
Course Co-ordinator			DR. AYANA CHAKRAROBTY									
TOTAL MARKS	50		TH	√		TUT			PRAC			
TOTAL HOURS	60		TH	√		TUT			PRAC			
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC			5									
NAME OF THE UNIT/MODULE			Transcription									
TOTAL HOURS	18		THEORY	√		TUTORIAL			PRAC			
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)												
SL	LECTURE HEAD/ TOPIC					HR	TEACHER	MONTH				
1	Introduction					1	AC	JANUARY				
2	Transcription in prokaryotes					1	AC	JANUARY				
3	Transcription process in prokaryotes					1	AC	JANUARY				
4	Transcription in eukaryotes					1	AC	JANUARY				
5	Transcription process in eukaryotes					1	AC	FEBUARY				
6	Principles of transcriptional regulation (Operon concept).					1	AC	FEBUARY				
7	Lac Operon concept					1	AC	FEBUARY				
8	Prokaryotes: regulation of lactose metabolism in <i>E. coli</i>					1	AC	FEBUARY				
9	Trp Operon Concept					1	AC	FEBUARY				
10	Prokaryotes: regulation of tryptophan synthesis in <i>E. coli</i>					1	AC	MARCH				
11	Eukaryotes: heat shock proteins as transcription factors					1	AC	MARCH				
12	Eukaryotes: steroids as transcription factors					1	AC	MARCH				
13	Eukaryotes: peptide hormones as transcription factors					1	AC	MARCH				
14	Gene silencing					1	AC	APRIL				
15	Gene silencing					1	AC	APRIL				
16	Doubt Clearing Class					1	AC	APRIL				
17	Doubt Clearing Class					1	AC	APRIL				
18	Class Test					1	AC	MAY				
TOTAL HOURS					18							

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	8			CREDIT POINT	4	Course Code	BOTACOR08T	
Name of the Course			Molecular Biology								
Course Co-ordinator			DR. AYANA CHAKRAROBTY								
TOTAL MARKS	50		TH	√		TUT			PRAC		
TOTAL HOURS	60		TH	√		TUT			PRAC		
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				6							
NAME OF THE UNIT/MODULE				Processing and modification of RNA							
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	SDG	MARCH		
2	Split genes-concept of introns and exons						1	SDG	APRIL		
3	Removal of introns, spliceosome machinery						1	SDG	APRIL		
4	Splicing pathways, group I and group II intron splicing						1	SDG	APRIL		
5	Alternative splicing eukaryotic mRNA processing (5' cap, 3' poly tail);						1	SDG	APRIL		
6	Ribozymes						1	SDG	APRIL		
7	RNA editing and mrna transport						1	SDG	APRIL		
8	Doubt clearing class						1	SDG	APRIL		
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		8			CREDIT POINT	4	Course Code	BOTACOR08T
Name of the Course			Molecular Biology								
Course Co-ordinator			DR. AYANA CHAKRAROBTY								
TOTAL MARKS	50	TH	√	TUT		PRAC					
TOTAL HOURS	60	TH	√	TUT		PRAC					
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				7							
NAME OF THE UNIT/MODULE				Translation							
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	SDG	APRIL		
2	Ribosome structure and assembly, mrna						1	SDG	APRIL		
3	Charging of trna, aminoacyl trna synthetases						1	SDG	APRIL		
4	Various steps in protein synthesis						1	SDG	MAY		
5	Proteins involved in initiation, elongation and termination of polypeptides						1	SDG	MAY		
6	Fidelity of translation; inhibitors of protein synthesis						1	SDG	MAY		
7	Post-translational modifications of proteins						1	SDG	MAY		
8	Doubt clearing class						1	SDG	MAY		
TOTAL HOURS						8					

SEMESTER :4
PRACTICAL

BOTACOR08P(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		8			CREDIT POINT	2	Course Code	BOTACOR08P
Name of the Course			MOLECULAR BIOLOGY								
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				PRACTICAL							
TOTAL HOURS	60		THEORY			TUTORIAL			PRAC	√	
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/ TOPIC					HR	TEACHER	MONTH			
1	Preparation of LB medium					2	SDG	JANUARY			
2	DNA isolation from cauliflower head					2	SDG	JANUARY			
3	Practice class and viva					2	SDG	JANUARY			
4	DNA estimation by diphenylamine reagent/UV Spectrophotometry					2	SDG	JANUARY			
5	Practice class					2	SDG	JANUARY			
6	Study of DNA replication mechanisms through photographs - Rolling circle					2	SDG	JANUARY			
7	Study of DNA replication mechanisms through photographs - Theta replication					2	SDG	FEBRUARY			
8	Study of DNA replication mechanisms through photographs - semi-discontinuous replication					2	SDG	FEBRUARY			
9	Study of structures of prokaryotic RNA polymerase through photograph.					2	SDG	FEBRUARY			
10	Study of structures of eukaryotic RNA polymerase II through photographs.					2	SDG	FEBRUARY			
11	Practice class					2	SDG	FEBRUARY			
12	Photographs establishing nucleic acid as genetic material - Messelson and Stahl's experiments.					2	SDG	FEBRUARY			
13	Photographs establishing nucleic acid as genetic material - Avery et al, experiments					2	SDG	FEBRUARY			
14	Photographs establishing nucleic acid as genetic material - Griffith's experiments					2	SDG	FEBRUARY			

15	Photographs establishing nucleic acid as genetic material - Hershey & Chase's experiments	2	SDG	MARCH
16	Photographs establishing nucleic acid as genetic material - Fraenkel & Conrat's experiments)	2	SDG	MARCH
17	Study of the following through photographs: assembly of Spliceosome machinery;	2	SDG	MARCH
18	Class test and viva	2	SDG	MARCH
19	Study of the following through photographs: splicing mechanism in group I intron.	2	SDG	MARCH
20	Study of the following through photographs: splicing mechanism in group II intron.	2	SDG	MARCH
21	Study of the following through photographs: ribozyme and alternative splicing.	2	SDG	APRIL
22	Practice class	2	SDG	APRIL
23	Practice class	2	SDG	APRIL
24	Practice Class	2	SDG	APRIL
25	Practice Class	2	SDG	APRIL
26	Practice Class	2	SDG	APRIL
27	Class test and viva	2	SDG	APRIL
28	Practice Class	2	SDG	MAY
29	Class test and viva	2	SDG	MAY
30	Class test and viva	2	SDG	MAY
Total		60		

SEMESTER :4

THEORY

BOTACOR09T(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		9			CREDIT POINT	4	Course Code	BOTACOR09T
Name of the Course			Plant Ecology and Phytogeography								
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				Introduction							
TOTAL HOURS	4	THEORY	√	TUTORIAL		PRAC					
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/ TOPIC						HR	TEACHER	MONTH		
1	Introduction to Plant Ecology						1	AB	JAN		
2	Basic concepts of Phytogeography						1	AB	JAN		
3	Levels of organization						1	AB	JAN		
4	Homeostasis.						1	AB	JAN		
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	ABI	SDG	SS	AB				
		MORN									
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020				HONS		GENERAL		
							√				
SEM		4	Core Course		9			CREDIT POINT	4	Course Code	BOTACOR09T
Name of the Course			Plant Ecology and Phytogeography								
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				Soil							
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	FEB		
2	Importance of soil						1	AB	FEB		
3	Origin and formation of soil						1	AB	FEB		
4	General Composition of soil						1	AB	FEB		
5	Physical; chemical and biological components of soil						1	AB	FEB		
6	Soil profile						1	AB	FEB		
7	Role of climate in soil development						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	ABI	SDG	SS	AB				
		MORN									
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020					HONS		GENERAL	
								√			
SEM		4	Core Course	9			CREDIT POINT	4	Course Code	BOTACOR09T	
Name of the Course			Plant Ecology and Phytogeography								
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				Water							
TOTAL HOURS	4	THEORY	√	TUTORIAL		PRAC					
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/ TOPIC						HR	TEACHER	MONTH		
1	Importance of soil in nature						1	AB	MAR		
2	States of water in the environment						1	AB	MAR		
3	Atmospheric moisture and hydrological cycle						1	AB	MAR		
4	Water in soil and water table						1	AB	MAR		
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	ABI	SDG	SS	AB				
		MORN									
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020					HONS		GENERAL	
								√			
SEM		4	Core Course		9			CREDIT POINT	4	Course Code	BOTACOR09T
Name of the Course			Plant Ecology and Phytogeography								
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				Light, temperature, wind and fire							
TOTAL HOURS	6	THEORY	√	TUTORIAL		PRAC					
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/ TOPIC						HR	TEACHER	MONTH		
1	Introduction to the impact of abiotic factors in nature						1	AB	MAR		
2	Variations in respect to light and adaptations of plants						1	AB	MAR		
3	Variations in respect to temperature and adaptations of plants						1	AB	MAR		
4	Variations in respect to wind and adaptations of plants						1	AB	MAR		
5	Variations in respect to fire and adaptations of plants						1	AB	APR		
6	Class Test						1	AB	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	ABI	SDG	SS	AB				
		MORN									
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020					HONS		GENERAL	
								√			
SEM		4	Core Course	9			CREDIT POINT	4	Course Code	BOTACOR09T	
Name of the Course			Plant Ecology and Phytogeography								
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				Biotic interactions							
TOTAL HOURS	2	THEORY	√	TUTORIAL				PRAC			
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/ TOPIC						HR	TEACHER	MONTH		
1	Trophic organization, basic source of energy; symbiosis, commensalism, parasitism						1	AB	APR		
2	Food chains and webs; ecological pyramids; biomass, standing crop						1	AB	APR		
TOTAL HOURS						2					

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS)											
NAME OF THE DEPARTMENT					BOTANY						
HOD		DR. AYANA CHAKRAROBTY									
INITIALS OF FACULTIES		DAY	AC	ABI	SDG	SS	AB				
		MORN									
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020					HONS		GENERAL	
								√			
SEM		4	Core Course	9			CREDIT POINT	4	Course Code	BOTACOR09T	
Name of the Course			Plant Ecology and Phytogeography								
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				Population ecology							
TOTAL HOURS	4		THEORY	√		TUTORIAL			PRAC		
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/ TOPIC						HR	TEACHER	MONTH		
1	Characteristics and Dynamics						1	AB	APR		
2	r selection						1	AB	APR		
3	k selection						1	AB	APR		
4	Ecological Speciation						1	AB	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	ABI	SDG	SS	AB				
		MORN									
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020					HONS		GENERAL	
								√			
SEM		4	Core Course	9			CREDIT POINT	4	Course Code	BOTACOR09T	
Name of the Course			Plant Ecology and Phytogeography								
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				Plant communities							
TOTAL HOURS	8	THEORY	√	TUTORIAL				PRAC			
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/ TOPIC						HR	TEACHER	MONTH		
1	Concept of ecological amplitude						1	SS	JAN		
2	Habitat and niche;						1	SS	JAN		
3	Characters- analytical and synthetic;						1	SS	JAN		
4	Ecotone and edge effect;						1	SS	JAN		
5	Dynamics - succession: processes, types						1	SS	JAN		
6	Climax concepts.						1	SS	FEB		
7	Doubt clear class						1	SS	FEB		
8	Class test						1	SS	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	ABI	SDG	SS	AB				
		MORN									
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020					HONS		GENERAL	
								√			
SEM		4	Core Course	9			CREDIT POINT	4	Course Code	BOTACOR09T	
Name of the Course			Plant Ecology and Phytogeography								
Course Co-ordinator			Sovan Sengupta								
TOTAL MARKS	50		TH	√		TUT			PRAC		
TOTAL HOURS	60		TH	√		TUT			PRAC		
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				8							
NAME OF THE UNIT/MODULE				Ecosystems							
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 processes						1	SS	FEB		
2	Trophic organisation						1	SS	FEB		
3	Food chains and food webs						1	SS	FEB		
4	Ecological pyramids						1	SS	FEB		
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	ABI	SDG	SS	AB				
		MORN									
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020				HONS		GENERAL		
							√				
SEM		4	Core Course		9			CREDIT POINT	4	Course Code	BOTACOR09T
Name of the Course			Plant Ecology and Phytogeography								
Course Co-ordinator			Sovan Sengupta								
TOTAL MARKS	50	TH	√	TUT		PRAC					
TOTAL HOURS	60	TH	√	TUT		PRAC					
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				9							
NAME OF THE UNIT/MODULE				Functional aspects of ecosystem							
TOTAL HOURS	8	THEORY	√	TUTORIAL		PRAC					
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/ TOPIC					HR	TEACHER	MONTH			
1	Principles and models of energy flow;.					1	SS	FEB			
2	production and productivity;					1	SS	MAR			
3	ecological efficiencies;					1	SS	MAR			
4	Types of biogeochemical cycles - cycling of carbon					1	SS	MAR			
5	cycling of nitrogen					1	SS	MAR			
6	cycling of phosphorus					1	SS	MAR			
7	Doubt Clear Class					1	SS	MAR			
8	Class Test					1	SS	MAR			
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	ABI	SDG	SS	AB				
		MORN									
PERIOD OF SEMESTER			FROM JANUARY 2020 TO JUNE 2020					HONS		GENERAL	
								√			
SEM		4	Core Course	9			CREDIT POINT	4	Course Code	BOTACOR09T	
Name of the Course			Plant Ecology and Phytogeography								
Course Co-ordinator			Sovan Sengupta								
TOTAL MARKS	50		TH	√		TUT			PRAC		
TOTAL HOURS	60		TH	√		TUT			PRAC		
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC					10						
NAME OF THE UNIT/MODULE					Phytogeography						
TOTAL HOURS	12		THEORY	√		TUTORIAL			PRAC		
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/ TOPIC						HR	TEACHER	MONTH		
1	Principles						1	SS	APR		
2	Continental drift and						1	SS	APR		
3	Theory of tolerance (brief account)						1	SS	APR		
4	Endemism;						1	SS	APR		
5	Brief description of major terrestrial biomes						1	SS	APR		
6	Tropical rain forest						1	SS	APR		
7	Temperate grassland						1	SS	APR		
8	Tundra biome						1	SS	APR		
9	Phytogeographical division of India(BSI 1996)						1	SS	MAY		
10	Local vegetation						1	SS	MAY		
11	Doubt clear class						1	SS	MAY		
12	Class test						1	AB	MAY		
TOTAL HOURS						12					

SEMESTER :4

PRACTICAL

BOTACOR09P (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		9			CREDIT POINT	2	Course Code
		BOTACOR09P								
Name of the Course			Plant Ecology and Phytogeography							
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				Introduction						
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 instruments used to measure microclimatic variables: Soil thermometer, maximum and minimum thermometer, anemometer, psychrometer/ hygrometer, rain gauge and lux meter.					2	SS	JAN		
2	Determination of pH of various soil and water samples (pH meter, universal indicator/Lovibond comparator and pH paper).					2	SS	JAN		
3	Analysis for carbonates, chlorides and nitrates from two soil samples by rapid field tests.					2	AB	JAN		
4	Analysis for organic matter and base deficiency from two soil samples by rapid field tests.					2	AB	JAN		
5	Determination of organic carbon of different soil samples by Walkley & Black rapid titration method.					2	AB	JAN		
6	Determination of organic carbon of different soil samples by Walkley & Black rapid titration method.					2	AB	FEB		
7	Determination of organic carbon of different soil samples by Walkley & Black rapid titration method.					2	AB	FEB		
8	Determination of dissolved oxygen of water samples from polluted and unpolluted sources.					2	AB	FEB		
9	Determination of carbon dioxide of water samples from polluted and unpolluted sources.					2	AB	FEB		
10	Study of anatomical adaptations of hydrophytes – by preparation of temporary slides of <i>Nymphaea</i> petiole					2	SS	FEB		

11	Study of anatomical adaptations of hydrophytes – by preparation of temporary slides of <i>Hydrilla</i> stem	2	SS	FEB
12	Study of anatomical adaptations of xerophytes – by preparation of temporary slides of <i>Nerium leaf</i>	2	SS	FEB
13	Study of anatomical adaptations of xerophytes – by preparation of temporary slides of <i>Casuarina</i> leaf.	2	SS	FEB
14	Study of biotic interactions of the Stem parasite (<i>Cuscuta</i>)– from permanent slides and preserved specimens.	2	SS	MAR
15	Study of biotic interactions of the Epiphytes (<i>Vanda</i> root), from permanent slides and preserved specimens.	2	SS	MAR
16	Study of biotic interactions of the Predation (Insectivorous plants) – from permanent slides and preserved specimens.	2	SS	MAR
17	Determination of minimum size of quadrat for the study of herbaceous vegetation by species area curve method (species to be listed).	2	SS	MAR
18	Quantitative analysis of herbaceous vegetation for frequency and comparison with Raunkiaer’s frequency distribution law.	2	AB	MAR
19	Quantitative analysis of herbaceous vegetation for density and abundance.	2	AB	MAR
20	Practice Class	2	AB	MAR
21	Practice Class	2	AB	MAR
22	Class test and viva	2	SS	APR
23	Class test and viva	2	SS	APR
24	Field visit to familiarize students with ecology of different sites.	2	SS & AB	APR
25	Field visit to familiarize students with ecology of different sites.	2	SS & AB	APR
26	Field visit to familiarize students with ecology of different sites.	2	SS & AB	APR
27	Practice Class	2	SS	MAY
28	Practice Class	2	SS	MAY
29	Practice Class	2	AB	MAY
30	Practice Class	2	AB	MAY
Total		60		

SEMESTER :4

THEORY

BOTACOR10T(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			FROM JANUARY 2020 TO JUNE 2020					HONS		GENERAL		
								√				
SEM	IV	Core Course		10				CREDIT POINT	4	Course Code	BOTACOR10T	
Name of the Course			Plant Systematics (CC10)									
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			Significance of Plant systematics									
TOTAL HOURS	23	THEORY	√	TUTORIAL						PRAC		
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)												
SL	LECTURE HEAD/TOPIC							HR	DAY	MONTH		
1.	Introduction to systematic.							1	ABJ	JAN		
2.	Difference between taxonomy and systematic.							1	ABJ	JAN		
3.	Aim of taxonomy and principles of taxonomy.							1	ABJ	JAN		
4.	Plant identification, classification, nomenclature.							1	ABJ	JAN		
5.	Plant systematic study by Evidences from palynology.							1	ABJ	JAN		
6.	Plant systematic study by Evidences from phytochemistry.							1	ABJ	JAN		
7.	Plant systematic study by Evidences from cytology.							1	ABJ	JAN		
8.	Plant systematic study by Evidences from molecular data.							1	ABJ	JAN		
9.	Functions and history of botanical gardens.							1	ABJ	JAN		
10.	About botanical gardens of the world and India.							1	ABJ	JAN		
11.	Botanical survey of India(BSI): History, Idea.							1	ABJ	JAN		
12.	Botanical survey of India(BSI): Role in Taxonomic study.							1	ABJ	JAN		
13.	Concepts of herbarium and herbaria.							1	ABJ	FEB		
14.	Procedure of herbarium preparation.							1	ABJ	FEB		
15.	Importance of herbarium.							1	ABJ	FEB		
16.	Importance of herbaria.							1	ABJ	FEB		
17.	Terms and concepts about virtual herbarium, Taxonomic literatures and it types.							1	ABJ	FEB		
18.	Terms and concepts about flora, e-flora.							1	ABJ	FEB		
19.	Terms and concepts about documentation, general index.							1	ABJ	FEB		
20.	Terms and concepts about manuals, botanical glossaries.							1	ABJ	FEB		
21.	Terms and concepts about taxonomic revision, bibliography, icons.							1	ABJ	FEB		
22.	Terms and concepts about monographs, journals.							1	ABJ	FEB		
23.	Taxonomic keys: single access and multi-access.							1	ABJ	FEB		
Total							23					

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	IV	Core Course		10				CREDIT POINT	4	Course Code	BOTACOR10T	
Name of the Course			Plant Systematics (CC10)									
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			Taxonomic hierarchy									
TOTAL HOURS	4	THEORY	√	TUTORIAL		PRAC						
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)												
SL	LECTURE HEAD/TOPIC							HR	DAY	MONTH		
1.	Idea about categories and taxonomic hierarchy.							1	ABJ	FEB		
2.	Concept of taxa (family, genus, species).							1	ABJ	FEB		
3.	Taxonomic species concept .							1	ABJ	FEB		
4.	Biological & evolutionary species concept.							1	ABJ	MAR		
Total							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	IV	Core Course		10				CREDIT POINT	4	Course Code	BOTACOR10T	
Name of the Course			Plant Systematics (CC10)									
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				Botanical nomenclature								
TOTAL HOURS	9	THEORY	√	TUTORIAL						PRAC		
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)												
SL	LECTURE HEAD/TOPIC							HR	DAY	MONTH		
1.	Botanical nomenclature, Principles and rules (ICN).							1	ABJ	MAR		
2.	Binomial names and its significance and ranks.							1	ABJ	MAR		
3.	Typification.							1	ABJ	MAR		
4.	How names are given, author citation.							1	ABJ	MAR		
5.	effective and valid publication.							1	ABJ	MAR		
6.	Rejection of names.							1	ABJ	MAR		
7.	principle of priority and its limitations.							1	ABJ	MAR		
8.	The abbreviated names.							1	ABJ	MAR		
9.	Names of hybrids, Alternative names.							1	ABJ	MAR		
Total							9					

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	IV	Core Course		10				CREDIT POINT	4	Course Code	BOTACOR10T	
Name of the Course			Plant Systematics (CC10)									
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			Systems of classification									
TOTAL HOURS	6	THEORY	√	TUTORIAL		PRAC						
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)												
SL	LECTURE HEAD/TOPIC							HR	DAY	MONTH		
1.	Contributions of Theophrastus, Linnaeus, Hutchinson, Takhtajan and Cronquist in Classification system.							1	ABJ	MAR		
2.	Types of classification system, Artificial classification.							1	ABJ	MAR		
3.	Natural Classification & Phylogenetic Classification.							1	ABJ	MAR		
4.	Bentham and Hooker classification systems.							1	ABJ	MAR		
5.	Engler and Prantl classification systems.							1	ABJ	MAR		
6.	Angiosperm phylogeny Group (APG III) classification.							1	ABJ	MAR		
Total							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	IV	Core Course		10				CREDIT POINT	4	Course Code	BOTACOR10T	
Name of the Course			Plant Systematics (CC10)									
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				Systems of classification								
TOTAL HOURS	6	THEORY	√	TUTORIAL		PRAC						
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)												
SL	LECTURE HEAD/TOPIC						HR	DAY	MONTH			
1.	Contributions of Theophrastus, Linnaeus, Hutchinson, Takhtajan and Cronquist in Classification system.						1	ABJ	APR			
2.	Types of classification system, Artificial classification.						1	ABJ	APR			
3.	Natural Classification & Phylogenetic Classification.						1	ABJ	APR			
4.	Bentham and Hooker classification systems.						1	ABJ	APR			
5.	Engler and Prantl classification systems.						1	ABJ	APR			
6.	Angiosperm phylogeny Group (APG III) classification.						1	ABJ	APR			
Total						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	IV	Core Course		10			CREDIT POINT	4	Course Code	BOTACOR10T	
Name of the Course			Plant Systematics (CC10)								
Course Co-ordinator			DR. AYANA CHAKRABORTY								
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			Phylogeny of Angiosperms								
TOTAL HOURS	11	THEORY	√	TUTORIAL					PRAC		
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	LECTURE HEAD/TOPIC						HR	DAY	MONTH		
1.	Terms and concepts of primitive and advanced feature.						1	ABJ	APR		
2.	Terms and concepts of homology and homoplasy.						1	ABJ	APR		
3.	Terms and concepts of analogy and parallelism.						1	ABJ	APR		
4.	Terms and concepts of convergence and divergence characters.						1	ABJ	APR		
5.	Terms and concepts of monophyly.						1	ABJ	APR		
6.	Terms and concepts of paraphyly.						1	ABJ	APR		
7.	Terms and concepts of polyphyly and clades.						1	ABJ	MAY		
8.	Origin of angiosperm.						1	ABJ	MAY		
9.	Evolution of angiosperms.						1	ABJ	MAY		
10.	Doubt Clearing Class.						1	ABJ	MAY		
11.	Doubt Clearing Class.						1	ABJ	MAY		
12.	Class test.						1	ABJ	MAY		
Total							12				

SEMESTER :4
PRACTICAL

BOTACOR10P(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	10			CREDIT POINT	2	Course Code	BOTACOR10P
Name of the Course		MOLECULAR BIOLOGY								
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				PRACTICAL						
TOTAL HOURS	60	THEORY				TUTORIAL		PRAC	√	
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)										
SL	LECTURE HEAD/ TOPIC					HR	TEACHER	MONTH		
1	Introduction					2	ABJ	JANUARY		
2	Procedure of plants collection					2	ABJ	JANUARY		
3	Study of Bengal plants, Identification procedure					2	ABJ	JANUARY		
4	Herbarium preparation					2	ABJ	JANUARY		
5	Study of the vegetative and floral characters of the families description : Asteraceae (Compositae)- <i>Sonchus</i>					2	ABJ	JANUARY		
6	Study of the vegetative and floral characters of the families description: Asteraceae (Compositae)- <i>Vernonia</i>					2	ABJ	JANUARY		
7	Study of the vegetative and floral characters of the families description: Asteraceae (Compositae)- <i>Eclipta</i>					2	ABJ	JANUARY		
8	Study of the vegetative and floral characters of the families description: Asteraceae (Compositae)- <i>Tridax</i>					2	ABJ	FEBRUARY		
9	Study of the vegetative and floral characters of the families description: Solanaceae - <i>Solanum spp</i>					2	ABJ	FEBRUARY		
10	Study of the vegetative and floral characters of the families description: Brassicaceae (Cruciferae) – <i>Nasturtium sp.</i>					2	ABJ	FEBRUARY		
11	Study of the vegetative and floral characters of the families description: Lamiaceae (Labiatae)- <i>Ocimum</i>					2	ABJ	FEBRUARY		
12	Study of the vegetative and floral characters of the					2	ABJ	FEBRUARY		

	families description: Lamiaceae (Labiatae)- <i>Leucus</i>			
13	Study of the vegetative and floral characters of the families description: Lamiaceae (Labiatae)- <i>Leonurus</i>	2	ABJ	FEBRUARY
14	Study of the vegetative and floral characters of the families description: Euphorbiaceae - <i>Euphorbia spp</i>	2	ABJ	FEBRUARY
15	Study of the vegetative and floral characters of the families description: Euphorbiaceae – <i>Croton SPP.</i>	2	ABJ	FEBRUARY
16	Study of the vegetative and floral characters of the families description: Malvaceae – <i>Sida spp</i>	2	ABJ	MARCH
17	Study of the vegetative and floral characters of the families description: Malvaceae – <i>Urena spp.</i>	2	ABJ	MARCH
18	Study of the vegetative and floral characters of the families description: Malvaceae – <i>Hibiscus vitifolius</i>	2	ABJ	MARCH
19	Study of the vegetative and floral characters of the families description: Polygonaceae – <i>Polygonum spp</i>	2	ABJ	MARCH
20	Study of the vegetative and floral characters of the families description: Acanthaceae – <i>Justicia spp.</i>	2	ABJ	MARCH
21	Study of the vegetative and floral characters of the families description: Acanthaceae – <i>Hygrophila</i>	2	ABJ	MARCH
22	Study of the vegetative and floral characters of the families description: Scrophulariaceae – <i>Lindenbergia spp.</i>	2	ABJ	MARCH
23	Study of the vegetative and floral characters of the families description: Scrophulariaceae – <i>Vandellia (Lindernia) spp.</i>	2	ABJ	MARCH
24	Study of the vegetative and floral characters of the families description: Rubiaceae – <i>Oldenlandia</i>	2	ABJ	APRIL
25	Study of the vegetative and floral characters of the families description: Rubiaceae – <i>Dentella</i>	2	ABJ	APRIL
26	Study of the vegetative and floral characters of the families description: : Asteraceae (Compositae)- <i>Ageratum spp.</i>	2	ABJ	APRIL
27	Study of the vegetative and floral characters of the families description: Solanaceae – <i>Physalis spp.</i>	2	ABJ	APRIL
28	Study of the vegetative and floral characters of the families description :Lamiaceae (Labiatae)- <i>Anisomeles spp.</i>	2	ABJ	APRIL
29	Practice Class	2	ABJ	MAY
30	Practice Class	2	ABJ	MAY
Total		60		

SEMESTER :4

SEC (Ethnobotany)

BOTSSEC02M

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	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 CHAKRABORTY									
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 CHAKRABORTY								
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		
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					