

CORE COURSE VI: (Economic Botany)

CODE: BOTACOR06T (4 Credits) & BOTACOR06P (2 Credits)

COURSE OUTCOME: Economic Botany is the study of sustainable uses of plants for our regular civilized life. People have been using plants for thousands of years. Plants are extremely important in human life throughout the world. People depend upon plants to satisfy such basic human needs as food, clothing, shelter, and health care. These needs are growing rapidly because of a growing world population, increasing incomes, and urbanization.

This course will be helpful for the students to acquire a clear knowledge on the use of plants in a broad field with many applications and use of plants as food, fodder, medicine, industrial and daily uses.

THEORY

(BOTACOR06T)

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS)										
NAME OF THE DEPARTMENT					BOTANY					
HOD		DR. AYANA CHAKRAROBTY								
INITIALS OF FACULTIES		DAY	AC	MS	SDG	SS	PB	AB		
		MORN								
PERIOD OF SEMESTER			FROM JULY 2019 TO DECEMBER 2019				HONS √		GENERAL	
SEM	3	Core Course			6	CREDIT POINT	4	Course Code	BOTACOR06T	
Name of the Course			Economic Botany							
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		Origin of Cultivated Plants								
TOTAL HOURS	6	THEORY	√	TUTORIAL		PRAC				
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)										
SL	TOPIC					HR	TEACHER	MONTH		
1	Introduction					1	AB	JULY		
2	Concept of centres of origin					1	AB	JULY		
3	Importance of centres of origin with reference to Vavilov's work					1	AB	AUG		
4	Examples of major plant introductions					1	AB	AUG		
5	Crop domestication and loss of genetic diversity.					1	AB	AUG		
6	Doubt clearing class					1	AB	AUG		
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	MS	SDG	SS	PB	AB			
		MORN									
PERIOD OF SEMESTER			FROM JULY 2019 TO DECEMBER 2019					HONS		GENERAL	
								√			
SEM	3	Core Course			6	CREDIT POINT	4	Course Code	BOTACOR06T		
Name of the Course			Economic Botany								
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					Cereals						
TOTAL HOURS	6	THEORY	√	TUTORIAL				PRAC			
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	TOPIC						HR	TEACHER	MONTH		
1	Wheat - origin, morphology						1	AB	AUG		
2	Wheat - cultivation & uses						1	AB	SEPT		
3	Rice- origin, morphology						1	AB	SEPT		
4	Rice- cultivation & uses						1	AB	SEPT		
5	Brief account on millets						1	AB	NOV		
6	Class test						1	AB	NOV		
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	MS	SDG	SS	PB	AB		
		MORN								
PERIOD OF SEMESTER		FROM JULY 2019 TO DECEMBER 2019					HONS		GENERAL	
							√			
SEM	3	Core Course		6	CREDIT POINT		4	Course Code	BOTACOR06T	
Name of the Course		Economic Botany								
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				Legumes						
TOTAL HOURS	6	THEORY	√	TUTORIAL				PRAC		
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)										
SL	TOPIC					HR	TEACHER	MONTH		
1	Origin of Chick pea & Pigeon pea					1	AB	NOV		
2	Morphology of Chick pea					1	AB	NOV		
3	Morphology of Pigeon pea					1	AB	NOV		
4	Uses of Chick pea & Pigeon pea					1	AB	DEC		
5	Importance to man and ecosystem					1	AB	DEC		
6	Class test					1	AB	DEC		
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	MS	SDG	SS	PB	AB				
		MORN										
PERIOD OF SEMESTER			FROM JULY 2019 TO DECEMBER 2019					HONS		GENERAL		
								√				
SEM	3	Core Course			6	CREDIT POINT		4	Course Code		BOTACOR06T	
Name of the Course			Economic Botany									
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				Sources of sugars and starches								
TOTAL HOURS	4	THEORY	√	TUTORIAL				PRAC				
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)												
SL	TOPIC						HR	TEACHER	MONTH			
1	Morphology of sugarcane						1	SS	JULY			
2	Processing of sugarcane; products and by-products of sugarcane industry						1	SS	JULY			
3	Potato - morphology & uses						1	SS	AUG			
4	Potato - propagation						1	SS	AUG			
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	MS	SDG	SS	PB	AB			
		MORN									
PERIOD OF SEMESTER			FROM JULY 2019 TO DECEMBER 2019					HONS		GENERAL	
								√			
SEM	3	Core Course			6	CREDIT POINT	4	Course Code	BOTACOR06T		
Name of the Course			Economic Botany								
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				Spices							
TOTAL HOURS	6	THEORY	√	TUTORIAL				PRAC			
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	TOPIC						HR	TEACHER	MONTH		
1	Introduction						1	SS	AUG		
2	Listing of important spices, their family and part used						1	SS	AUG		
3	Economic importance with special reference to fennel						1	SS	AUG		
4	Economic importance with special reference to saffron						1	SS	AUG		
5	Economic importance with special reference to						1	SS	AUG		

	clove			
6	Economic importance with special reference to black pepper	1	SS	SEPT
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	MS	SDG	SS	PB	AB				
	MORN										
PERIOD OF SEMESTER		FROM JULY 2019 TO DECEMBER 2019					HONS √		GENERAL		
SEM	3	Core Course		6	CREDIT POINT	4	Course Code	BOTACOR06T			
Name of the Course		Economic Botany									
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				Beverages							
TOTAL HOURS	4	THEORY	√	TUTORIAL			PRAC				
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)											
SL	TOPIC					HR	TEACHER	MONTH			
1	Introduction					1	SS	SEPT			

2	Tea and coffee - morphology	1	SS	SEPT
3	Tea and coffee - processing	1	SS	SEPT
4	Tea and coffee - uses	1	SS	SEPT
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	MS	SDG	SS	PB	AB			
	MORN									
PERIOD OF SEMESTER		FROM JULY 2019 TO DECEMBER 2019					HONS √		GENERAL	
SEM	3	Core Course		6	CREDIT POINT	4	Course Code	BOTACOR06T		
Name of the Course		Economic Botany								
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				Sources of oils and fats						
TOTAL HOURS	10	THEORY	√	TUTORIAL			PRAC			
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)										
SL	TOPIC					HR	TEACHE	MONTH		

			R	
1	General description	1	SS	SEPT
2	Classification	1	SS	SEPT
3	Extraction	1	SS	OCT
4	Uses and health implications of groundnut, linseed, soybean, mustard and coconut.	1	SS	NOV
5	Groundnut, linseed, soybean, mustard and coconut (botanical name, family & uses	1	SS	NOV
6	Essential oils - Santalum, general account, extraction methods	1	SS	NOV
7	Essential oils - Eucalyptus: general account, extraction methods	1	SS	NOV
8	Comparison with fatty oils & their uses	1	SS	NOV
9	Doubt clearing test	1	SS	NOV
10	Class test	1	SS	NOV
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	MS	SDG	SS	PB	AB			
	MORN									
PERIOD OF SEMESTER		FROM JULY 2019 TO DECEMBER 2019					HONS √		GENERAL	
SEM	3	Core Course		6	CREDIT POINT	4	Course Code	BOTACOR06T		
Name of the Course		Economic Botany								
Course Co-ordinator		DR. AYANA CHAKRAROBTY								
TOTAL MARKS	50	TH	√	TUT			PRAC			
TOTAL HOURS	60	TH	√	TUT			PRAC			
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				8						
NAME OF THE UNIT/MODULE				Natural Rubber						
TOTAL HOURS	3	THEORY	√	TUTORIAL			PRAC			
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)										
SL	TOPIC					HR	TEACHER	MONTH		

1	Para-rubber, tapping	1	SS	NOV
2	Para-rubber, processing	1	SS	NOV
3	Para-rubber, uses	1	SS	DEC
TOTAL HOURS		3		

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS)										
NAME OF THE DEPARTMENT					BOTANY					
HOD		DR. AYANA CHAKRAROBTY								
INITIALS OF FACULTIES	DAY	AC	MS	SDG	SS	PB	AB			
	MORN									
PERIOD OF SEMESTER		FROM JULY 2019 TO DECEMBER 2019					HONS √		GENERAL	
SEM	3	Core Course		6	CREDIT POINT		4	Course Code	BOTACOR06T	
Name of the Course		Economic Botany								
Course Co-ordinator		DR. AYANA CHAKRAROBTY								
TOTAL MARKS	50	TH	√	TUT				PRAC		
TOTAL HOURS	60	TH	√	TUT				PRAC		
UNIT/ SECTION/ GROUP/ MODULE/ TOPIC				9						
NAME OF THE UNIT/MODULE				Drug yielding plants						
TOTAL HOURS	8	THEORY	√	TUTORIAL				PRAC		

DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)				
SL	TOPIC	HR	TEACHER	MONTH
1	Introduction	1	SS	DEC
2	Therapeutic and habit-forming drugs with special reference to <i>Cinchona</i>	1	SS	DEC
3	Therapeutic and habit-forming drugs with special reference to <i>Digitalis</i>	1	SS	DEC
4	Therapeutic and habit-forming drugs with special reference to <i>Papaver</i>	1	SS	DEC
5	Therapeutic and habit-forming drugs with special reference to <i>Cannabis</i>	1	SS	DEC
6	Tobacco - Morphology	1	X	X
7	Tobacco - processing, uses and health hazards	1	X	X
8	Class test	1	X	X
TOTAL HOURS		8		

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS)										
NAME OF THE DEPARTMENT					BOTANY					
HOD		DR. AYANA CHAKRABORTY								
INITIALS OF FACULTIES		DAY	AC	MS	SDG	SS	PB	AB		
		MORN								
PERIOD OF SEMESTER		FROM JULY 2019 TO DECEMBER 2019					HONS √		GENERAL	
SEM	3	Core Course		6	CREDIT POINT	4	Course Code	BOTACOR06T		
Name of the Course		Economic Botany								
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				Timber plants						
TOTAL	3	THEOR	√	TUTORIA		PRAC				

HOURS		Y		L			
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)							
SL	TOPIC				HR	TEACHER	MONTH
1	General account with special reference to teak				1	X	X
2	General account with special reference to sal				1	X	X
3	General account with special reference to and pine				1	X	X
TOTAL HOURS					3		

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS)										
NAME OF THE DEPARTMENT					BOTANY					
HOD		DR. AYANA CHAKRAROBTY								
INITIALS OF FACULTIES		DAY	AC	MS	SDG	SS	PB	AB		
		MORN								
PERIOD OF SEMESTER		FROM JULY 2019 TO DECEMBER 2019					HONS √		GENERAL	
SEM	3	Core Course		6	CREDIT POINT		4	Course Code	BOTACOR06T	
Name of the Course		Economic Botany								
Course Co-ordinator		DR. AYANA CHAKRAROBTY								
TOTAL MARKS	50	TH	√	TUT				PRAC		
TOTAL HOURS	60	TH	√	TUT				PRAC		

UNIT/ SECTION/ GROUP/ MODULE/ TOPIC		11				
NAME OF THE UNIT/MODULE		Fibers				
TOTAL HOURS	4	THEORY	√	TUTORIAL		PRAC
DISTRIBUTION OF LESSON PLAN (MODULE/ UNIT/ SECTION/ TOPIC WISE)						
SL	TOPIC			HR	TEACHER	MONTH
1	Classification based on the origin of fibers			1	X	X
2	Cotton and Jute - morphology			1	X	X
3	Cotton and Jute - extraction			1	X	X
4	Cotton and Jute - uses			1	X	X
TOTAL HOURS				3		

PRACTICAL

(BOTACOR06P)

BASIRHAT COLLEGE LESSON PLAN FOR CBCS (FOR HONS)										
NAME OF THE DEPARTMENT					BOTANY					
HOD		DR. AYANA CHAKRAROBTY								
INITIALS OF FACULTIES	DAY	AC	MS	SDG	SS	PB	AB			
	MORN									
PERIOD OF SEMESTER		FROM JULY 2019 TO DECEMBER 2019					HONS		GENERAL	
							√			
SE M	3	Core Course		6	CREDIT POINT		2	Course Code	BOTACOR06P	
Name of the Course		Economic Botany (Practical)								
Course Co-ordinator		DR. AYANA CHAKRAROBTY								
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	TOPIC			HR	Teacher	Month	
1	Wheat : habit sketch, L. S/T.S. grain			2	AB	JULY	
2	Wheat : Starch grains - type; micro-chemical tests - iodine spot test			2	AB	AUG	
3	Rice: habit sketch, study of paddy and grain			2	AB	AUG	
4	Rice: Starch grains- type; micro-chemical tests - iodine spot test			2	AB	AUG	
5	Soybean: habit sketch, fruit, seed structure			2	AB	AUG	
6	Soybean: micro-chemical tests (Millon test)			2	AB	AUG	
7	Ground nut: habit sketch, fruit, seed structure			2	AB	SEPT	
8	Ground nut: micro-chemical tests (Sudan IV test)			2	AB	SEPT	
9	Sugarcane - habit sketch			2	AB	SEPT	
10	Sugarcane : cane juice- micro-chemical tests (Molisch test)			2	AB	OCT	
11	Potato : habit sketch, tuber morphology, T.S. of tuber to show localization of starch grains w.m. starch grains			2	AB	NOV	
12	Potato : micro-chemical tests (Iodine test)			2	AB	NOV	
13	Black pepper: Demonstration, habit sketch and comments			2	SS	JULY	
14	Fennel : Demonstration, habit sketch and comments			2	SS	JULY	
15	Clove : Demonstration, habit sketch and comments			2	SS	AUG	
16	Tea leaf : extraction (Biochemical Tests for Tannin) and comments			2	SS	AUG	
17	Coffee bean : extraction (Biochemical Tests for Alkaloid) and comments			2	SS	AUG	
18	Coconut : kernel : tests for fats (Sudan IV test)			2	SS	AUG	
19	Mustard : seeds: tests for fats (Sudan IV test)				SS	SEPT	
20	Habit sketch of <i>Santalum</i> (specimens /photographs)			2	SS	SEPT	
21	Habit sketch of <i>Eucalyptus</i> (specimens /photographs)				SS	SEPT	
22	Study of drug yielding plants: <i>Digitalis</i>			2	SS	NOV	

23	Study of drug yielding plants: <i>Papaver</i>	2	SS	NOV
24	Study of drug yielding plants: <i>Cannabis</i>	2	SS	NOV
25	Study of Specimen and products of Tobacco	2	SS	DEC
26	<i>Tectona</i> : Section of young stem specimen	2	AB	NOV
27	<i>Pinus</i> : Section of young stem specimen	2	AB	NOV
28	<i>Shorea</i> : Section of young stem specimen	2	AB	NOV
29	Cotton: specimen whole mount of fiber and test for cellulose - general test with benzene and/or aniline acetate test	2	SS	DEC
30	Jute : transverse section of stem, test for lignin - phloroglucinol test on transverse section of stem and fiber	2	SS	DEC
	Total	60		