## St. Aloysius' College (Autonomous) Jabalpur, M. P. Department of Botany and Microbiology B.Sc. I Semester Botany

# **Applied Botany**

Paper—1/ Elective

## Session 2023-24

#### Part A - Introduction

Program: Certificate Class: B.Sc			Year: B.Sc. I	Session: 2023-24				
		1 Semeste:	r	Semester				
Subject: Botany								
1	Course Code		S1-BOTA1T					
2	Course Title		Applied Botany (Paper I)					
3	Course Type (Core Course/Elective/Generic Elective/Vocational/.)		Elective Course					
4	Pre-requisite (if any)		To study this course, a student must have had the subject Biology/ Life Sciences/ Agriculture in class/12 <sup>th</sup>					
5	5 Course Learning outcomes (CLO)		<ul> <li>On completion of this course, the learners will</li> <li>CO 1- to apply fundamental knowledge of various agricultural practices and the scientific methods to solve problems at national and local level in agriculture</li> <li>CO 2 - be able to understand the significance and role of botany.</li> <li>CO3 - be able to learn the basic aspects of applied botany.</li> <li>CO4 - be able to explore about employment opportunities in field of botany.</li> <li>CO 5 - be able to understand the opportunities of social services.</li> <li>CO 6 - be able to gain knowledge about best health practices.</li> <li>CO 7 - be able to explore startup opportunities in field of botany.</li> </ul>					
6	Credit Value		3 Credits					
7	Total Marks		Max. Ma	arks: 40+60	Minimum marks: 35			

Part B- Content of the Course					
Total No. of Lectures- 60 Hours Tutorials-00 Practical-00 (04 hours per week):					
L-I-F Unit	nit Topic				
		Lectures			
Ι	1.1 Introduction, objective and importance of applied botany	10			
	1.2 History and evolution of botany.				
	1.3 Relation of plants to man and relation with other services.				
	1.4 Various disciplines of botany and their applications to human welfare.				
Π	1.1 Definition and types of pollution and pollutants	11			
	1.2 Phytoremediation: Air, water, soil, noise and thermal pollutants (any 5 plants with botanical name, family) and their role in pollution control.				
	1.3 Bioremediation: definition and types.				
III	1.1 Ancient agricultural practices.	12			
	1.2 Modern agriculture practices: polyhouse, drip irrigation, hydroponics, computer-based agriculture, terrace farming.				
	1.3 Organic farming: introduction, objective and brief technique				
	1.4 Horticulture: definition and role in human welfare				
	1.5 Forestry: definition, branches and role in human welfare				
	1.6 Silviculture: definition and management practices				
IV	1.1 Role of Botany in Rural development	12			
	1.2 Ethnobotany: Introduction and importance				
	1.3 Ethnomedicine: Definition and examples. (Local name, botanical name, family and importance of Neem, Aloe, Clove, Ginger, Tulsi, Turmeric, Giloy, Emblica, Ashwagandha, Arandi)				
Keywo	<ul> <li>1.4 Ethno-fibres: Definition and examples (Local name, botanical name, family and importance of Jut, Coconut, Elephant Grass, Cotton)</li> <li>1.5 Ethno-food crops: Definition and examples (local name, botanical name, family and importance of Garadu, Singada, Kutaki, Sama, Kodo, Bathua, Sehjan, Jowar, Makka, Bajra, Jau)</li> <li>pords/Tags: Applied Botany, History of Botany, Evolution of Botany, Botany</li> </ul>	in Human			
Welfare, : Pollution, Pollutants, Phytoremediation, Bioremediation, Hydroponics, Polyhouse, Terrace Farming, Organic Farming, Horticulture, Silviculture, Ethnobotany, Ethnomedicine, Ethno-					

# Theory

Fibers, Ethno-Food Crops

#### Part C – Learning Resources Text Books, References Books, Other Resources.

#### Suggested Reading:

- 1. Levetin E. And Mcmahon K. "Plants and Society" Mc Graw Hill Education. 2007
- 2. Maiti R., Rodrigues H.G. and Thakur A.S. "Applied Botany" American Academic Press.2017
- 3. Negi S.S. "Forest Botany " M/S Bishen Singh Mahendra Pal Singh 2012
- 4. Agrahari R.P. "Environment Ecology, Biodiversity, Climate Change and Disaster Management" Mc Graw Hill Education. 2020
- 5. Sharma D. K. "Biodiversity Conservation: Current Status and Future Strategies" Write and Print Publication. 2017
- 6. Singh J. "Biodiversity Environment and Sustainability" MD Publications Pvt Ltd/2008

Part – D – Assessment and evaluation							
Suggested Continuous evaluation methods :							
Max. Marks: 100							
Continuous comprehensive evaluation (CCE) marks : 40 University examination (UE) marks : 60							
Internal assessment	Class test	15					
Continuous	Assignment/ presentation	25					
comprehensive							
evaluation (CCE)		Total marks : 40					
External	section A: Three very short questions (50						
assessment:	words each)	Total marks : 60					
University	section B: Three short questions (200 words						
examination	each)						
section: 60	section C: Three long questions (500 words						
Time – 2:00 Hours	each)						