

DEPARTMENT OF BOTANY, OSMANIA UNIVERSITY
M.Sc. BOTANY (CBCS)
New Syllabus (Effective from Academic Year 2022-2023)
Course Structure
Proposed Scheme

Semester I				Semester II				Semester III				Semester IV			
Course	Hrs /Wk	Credits	Marks	Course	Hrs /Wk	Credits	Marks	Course	Hrs /Wk	Credits	Marks	Course	Hrs /Wk	Credits	Marks
1 CORE 1 MBOT.CC.T.1.1.10 1	3	3	30+70	1 CORE 1 MBOT.CC.T.1.20 1	3	3	30+70	1 CORE 1 MBOT.CC.T.2.301	3	3	30+70	1 CORE 1 MBOT.CC.T.2.40 1	3	3	30+70
2 CORE 2 MBOT.CC.T.1.1.10 2	3	3	30+70	2 CORE 2 MBOT.CC.T.1.20 2	3	3	30+70	2 CORE 2 MBOT.CC.T.2.302	3	3	30+70	2 CORE 2 MBOT.CC.T.2.40 2	3	3	30+70
3 CORE 3 MBOT.CC.T.1.1.10 3	3	3	30+70	3 CORE 3 MBOT.CC.T.1.20 3	3	3	30+70	3 ELECTIVE - I MBOT.CC.T.2.303	3	3	30+70	3 ELECTIVE - III MBOT.CC.T.2.40 3	3	3	30+70
4 CORE 4 MBOT.CC.T.1.1.10 4	3	3	30+70	4 CORE 4 MBOT.CC.T.1.20 4	3	3	30+70	4 ELECTIVE - II MBOT.CC.T.2.304	3	3	30+70				
5 CORE 1 Practical MBOT.CC.P.1.1.10 5	4	2	50	5 CORE 1 Practical MBOT.CC.P.1.205	4	2	50	5 CORE 1 Practical MBOT.CC.P.2.305	4	2	50	4 CORE 1 Practical MBOT.CC.P.2.40 5	4	2	50
6 CORE 2 Practical MBOT.CC.P.1.1.10 6	4	2	50	6 CORE 2 Practical MBOT.CC.P.1.206	4	2	50	6 CORE 2 Practical MBOT.CC.P.2.306	4	2	50	5 CORE 2 Practical MBOT.CC.P.2.40 6	4	2	50
7 CORE 3 Practical MBOT.CC.P.1.1.10 7	4	2	50	7 CORE 3 Practical MBOT.CC.P.1.207	4	2	50	7 ELECTIVE-I Practical MBOT.CC.P.2.307	4	1	50	6 ELECTIVE-III Practical MBOT.CC.P.2.40 7	4	1	50
8 CORE 4 Practical MBOT.CC.P.1.1.10 8	4	2	50	8 CORE 4 Practical MBOT.CC.P.1.208	4	2	50	8 ELECTIVE-II Practical MBOT.CC.P.2.308	4	1	50	7 PROJECT MBOT.CC.P.2.40 8	4	6	150
9 Seminar	2	0		9 Seminar	2	1		9 Seminar	2	1		9 Seminar	2		
Total		20	600	Total		21	600	Total		19	600	Total	29	20	600

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Course Structure
Semester – I

S.N.	Subject Code	Subject Title	Credits	Instruction Hrs/week	Duration of (hrs) Exam.	Evaluation		Total Marks
	THEORY					Internal	External	
1.	MBOT.CC.T.1.101	Phycology and Mycology	3	3	3	30	70	100
2.	MBOT.CC.T.1.102	Bryophyta and Pteridophyta	3	3	3	30	70	100
3.	MBOT.CC.T.1.103	Angiosperm Systematics	3	3	3	30	70	100
4.	MBOT.CC.T.1.104	Plant Biochemistry	3	3	3	30	70	100
PRACTICALS								
5.	MBOT.CC.P.1.105	Practical Lab-I	2	4	3	-	50	50
6.	MBOT.CC.P.1.106	Practical Lab-II	2	4	3	-	50	50
7.	MBOT.CC.P.1.107	Practical Lab-III	2	4	3	-	50	50
8.	MBOT.CC.P.1.108	Practical Lab-IV	2	4	3	-	50	50
Total:			20	28		600	600	600

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M.Sc. BOTANY- I SEMESTER

MBOT.CC.T.1.101

(CORE)

3 Hrs/Week 3 Credits

PAPER – I: Phycology and Mycology

UNIT-I: Classification of Algae and Fungi

1. General characters and comparative study of important systems of Classification of Algae-Fritsch and Parker systems of classification
2. Criteria used in the primary classification of Algae: a) Pigments b) Reserve food materials c) Flagella
3. Algae on diverse habitats – Terrestrial, Freshwater, Marine, Reproduction in algae (vegetative, asexual and sexual)
4. General characters of true fungi and fungi like organisms, Classification of fungi (Alexopoulos and Mims 1996 and Hibbett *et.al* 2007)
5. Brief account of hyphal structure, mode of nutrition, types of reproduction in fungi (asexual, sexual and fruiting bodies). Heterokaryosis, Parasexual cycle and Sex Pheromones (hormones) in fungi.

UNIT – II: Algae

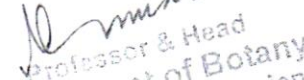
Morphology, life history and classification of the following groups of algae.

1. Cyanophyceae: *Microcystis*, *Lyngbya* and *Aulosira*
2. Chlorophyceae: *Eudorina*, *Pediastrum*, *Hydrodictyon*, *Pithophora*
3. Chlorophyceae: *Ulva*, *Stigeocolmum*, *Draparnaldiopsis*
4. Chlorophyceae: *Cosmarium*, *Closterium* and *Bryopsis*
5. Charophyceae: *Nitella*

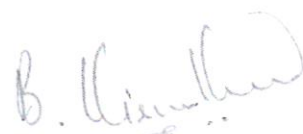
UNIT – III: Fungi


Morphology life cycle (Hibbett *et.al* 2007) of the following types.

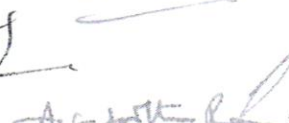
1. Microsporidia: General account
Chytridiomycota: *Synchytrium*
2. Blastocladiomycota: *Allomyces*, *Pilobolus*
Neocallimastigomycota: General account
3. Detailed account of Ascomycota - *Taphrina*, *Emericella*, *Neurospora*, *Gibberella*, *Glomerella*, *Morchella*


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