Reg. No ..... Name **23P106**

M. Sc. DEGREE END SEMESTER EXAMINATION : NOVEMBER 2023

SEMESTER 1 : BOTANY

COURSE : **21P1BOTT01 : MICROBIOLOGY AND PHYCOLOGY**

(For Regular -2023 Admission and Improvement/Supplementary -2022/2021 Admissions)

Duration : Three Hours Max. Weights: 30

PART A

Answer any 8 questions **Weight: 1**

1.	What is flagellation? What are its types?	(R)
2.	What is BOLD? How is it helpful in species identification?	(An, CO 1, CO 5)
3.	What are compound zoospores? Where do we find them?	(U)
4.	Differentiate aplanospore from zoospore.	(U)
5.	What is ASP?	(U, CO 2, CO 3, CO 4)
6.	What are gnotobiotic animals?	(R)
7.	Give an account on viral genome.	(U)
8.	Comment on the receptacle of *Sargassum*.	(An, CO 1, CO 2, CO 3)
9.	Differentiate between macronutrients and micronutrients required for bacterial growth.	(An)
10.	Write a note on fossil algae. Give examples.	(E, CO 1, CO 4, CO 5)

(1 x 8 = 8)

PART B

Answer any 6 questions **Weights: 2**

11.	Comment on symbiotic algae.	(An, CO 3, CO 4)
12.	What is holdfast? What is its function? Name two algae which possess this structure.	(U, CO 1, CO 3)
13.	Give a brief note on epidemiology and transmission of HIV.	(U)
14.	Explain phycocolloids.	(An, CO 3, CO 4)
15.	Explain the mechanism of flagellar movement in bacteria.	(U)
16.	With suitable diagrams, explain various asexual spores produced by Algae.	(An, CO 2)
17.	Methanogens and nitrifying bacteria are considered as chemolithoautotrophs. Substantiate.	(An)
18.	With suitable examples, explain various sexual reproductive methods in Algae.	(An, CO 2)

(2 x 6 = 12)

PART C

Answer any 2 questions **Weights: 5**

19.	Examine stages in bacteriophage life cycles with suitable diagram and examples.	(An)
20.	Distinguish major groups of Bacteria based on their characteristic features. Specify their biological significance.	(An)
21.	Discuss the role of Algae in experimental studies.	(An, CO 3, CO 4)
22.	Write an essay on pigmentation in Algae.	(U, CO 1)

(5 x 2 = 10)

OBE: Questions to Course Outcome Mapping

CO	Course Outcome Description	CL	Questions	Total Wt.
CO 1	Appraise the world of microbial diversity and their evolutionary relationships	E	2, 8, 10, 12, 22	10
CO 2	Explain the reproductive behavior in Algae and other microbes	E	5, 8, 16, 18	6
CO 3	Examine the ecological significance of the lower groups of plants and protists	E	5, 8, 11, 12, 14, 21	13
CO 4	Examine the economic significance of the lower groups of plants and protists	E	5, 10, 11, 14, 21	11
CO 5	Develop a practice to collect and identify various algal forms	A	2, 10	2

Cognitive Level (CL): Cr - CREATE; E - EVALUATE; An - ANALYZE; A - APPLY; U - UNDERSTAND; R - REMEMBER;