

Department of Botany
School of Chemical & Life Sciences
Jamia Hamdard, New Delhi-110062

B.Sc. (HONS) BOTANY
I SEMESTER EXAMINATION DECEMBER 2025

Paper Name: **Diversity of Microbes, Algae and Fungi**

Paper Code: **BBO-DSC101**

Time: **2½ hours**

Maximum Marks: **60**

Note: This paper has 3 sections A, B, and C.

Section A: Answer all the questions. **Section B:** Attempt any 5 out of 6.

Section C: Attempt any 2 out of 3.

Abbreviations used:

CO-Course Outcomes

CO1: : develop an understanding of microbes, algae, fungi and lichens and appreciate their adaptive strategies (understand);

CO2: classify microbes, algae, fungi and lichens (understand);

CO3: compare and contrast the general characteristics of viruses, bacteria, algae, fungi and lichens. (analyze and evaluate); and

CL4: assess the economic importance of viruses, bacteria, algae, fungi and lichens (evaluate).

BTL-Bloom's Taxonomy Levels

1- Remembering, 2-Understanding, 3-Applying, 4-Analyzing, 5-Evaluating, 6-Creating

SECTION A

Very Short Type Question (15 questions)

15 x 1 = 15 marks

Q.No.	Questions	Marks	CO	BTL
1	What are capsomere?	1	3	1
2	Differentiate sense RNA from antisense RNA.	1	3	1
3	The term bacteriophage was given by....	1	1	1
4	What are Prions?	1	1	2
5	What are mesosomes?	1	3	2
6	What is meant by extrachromosomal DNA?	1	3	2
7	The function of pili in bacteria is.....	1	3	1
8	What is the glycan backbone in peptidoglycan made of....	1	3	1
9	What are spheroplast?	1	3	2
10	What is Gaidukov phenomenon?	1	1	2
11	Name an algae which is endozoic.	1	3	1
12	What is the function of eye spot in algae?	1	3	1
13	Name the phycobilins found in algae and state their function.	1	3	1,2
14	Name a symbiotic alga found in water fern <i>Azolla</i> .	1	1	1
15	What are dolipore septa?	1	3	1

P.T.O.

SECTION B

Short Type Question. (Attempt any five out of six)

5 x 5 = 25 marks

Q.No.	Question	Marks	CO	BTL
1	Draw the ultrastructure of a bacteria and label its parts with their function.	5	3	2
2	Differentiate a gram positive bacteria from a gram negative bacteria.	5	2	4
3	Explain specialized transduction.	5	3	2
4	Discuss in detail the modes of asexual reproduction in algae, with suitable examples.	5	3	2
5	Write a short note on "range of thallus organization in algae".	5	3	2
6	Highlight the economic importance of algae?	5	4	4

SECTION C

Long type Question (Attempt any two out of three)

2 x 10 = 20 marks

Q.No.	Question	Marks	CO	BTL
1	With the help of labelled diagram/s describe the structure and life cycle of a). <i>Chara</i> b). <i>Oedogonium</i>	5 5	1,3	2
2	Write the economic importance of bacteria.	10	4	3, 4
3	Describe various modes of sexual reproduction in fungi?	10	3	2

END OF QUESTION PAPER