

63(FY) SEM-1/MAJ1/BOTMAJ1014

2023

(Held in 2024)

BOTANY

Paper : BOTMAJ1014

**(Microbes, Phycology, Mycology
and Lichenology)**

Full Marks : 50

Pass Marks : 20

Time : 2 hours

*The figures in the margin indicate full marks
for the questions*

1. Choose the correct answer : 1×5=5

(a) Bacteriophages were discovered by

(i) F. Twort and W. M. Stanley

(ii) Bawden and Pirie

(iii) F. Twort and F. d'Herelle

(iv) M. Delbruck and S. Luria

(2)

- (b) Asexual reproduction in lichen occurs by
- (i) apothecium
 - (ii) ascospores
 - (iii) isidia
 - (iv) pycnidiospores
- (c) Species of *Penicillium* are commonly known as
- (i) blue-green mould
 - (ii) green mould
 - (iii) orange bread mould
 - (iv) pin mould
- (d) Blue-green algae belong under the division
- (i) Chlorophyta
 - (ii) Rhodophyta
 - (iii) Cyanophyta
 - (iv) Phaeophyta
- (e) Cauliflower mosaic virus is
- (i) ds DNA virus
 - (ii) ds RNA virus
 - (iii) ss RNA virus
 - (iv) ss DNA virus

(3)

2. Answer the following questions (any five) :
2×5=10
- (a) What is heterocyst?
 - (b) Define the term 'coenocytic hyphae'.
 - (c) Mention at least two harmful activities of algae.
 - (d) Give two points of similarities between bacteria and cyanobacteria.
 - (e) What is an arbuscular mycorrhiza?
 - (f) The systematic position of *Vaucheria* is highly debated as it shares some characters with two different classes of algae. Name the classes into which it can be classified.
3. Answer the following questions (any five) :
5×5=25
- (a) Describe briefly about the ultra-structure of a bacterial cell.
 - (b) Write the ecological significance of lichen.
 - (c) Discuss briefly different types of modifications of mycelia in fungi.
 - (d) Write shortly a general account of the range of thallus structure in algae.
 - (e) Discuss in brief the transmission of viruses.

(4)

- (f) Describe the nature of growth in microbial populations.
- (g) Describe the vegetative method of reproduction in fungi.
- (h) Give an account of the cell structure in Cyanophyceae.

4. Answer the following question (any one) : 10

- (a) Give an account of the structure and reproduction in Volvox.
- (b) Discuss the life cycle of Agaricus with suitable diagram.

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