



**MJ-513**

**M.Sc. Botany**

**1st Semester Examination, July-Dec., 2021**

**Paper - III**

**Microbiology, Phycology and Mycology**

**Time : Three Hours]                      [Maximum Marks : 80**  
**[Minimum Pass Marks : 16**

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**Note : Answer from all the Units and Question No. 1**  
**is compulsory. All questions carry equal marks.**

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**1. Write short notes on the following :**

- (a) Chemical nature of virus**
  - (b) Flagellation in bacteria**
  - (c) Heterothallism in fungi**
  - (d) Diatoms**
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(2)

### Unit-I

2. Why viruses are called Biological enigma? Describe.

**OR**

Write notes on any two of the following :

- (a) Transmission of virus
- (b) Bacteriophages
- (c) Conjugation in bacteria

### Unit-II

3. Describe the life cycle of mycoplasm.

**OR**

Write notes on any two of the following :

- (a) Replication of viruses
- (b) Ultrastructure of virions
- (c) Isolation of virus

### Unit-III

4. Describe the different types of thallus organisation found in chlorophyta.

**OR**

Write notes on any two of the following :

- (a) Post-fertilization changes in rhodophyta
- (b) Economic importance of algae
- (c) Phaeophyta — salient features

( 3 )

**Unit-IV**

5. What is mycorrhiza? Explain types and importance of mycorrhiza.

**OR**

Write notes on any two of the following :

- (a) Heterothallism
  - (b) Parasexuality
  - (c) Cercospora
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