

- (b) Describe sexual mode of reproduction in *Spirogyra*. (5)

4. Differentiate between the following (Any three): (3×5=15)

- (i) Conjugation and transduction
- (ii) Gram-positive and Gram-negative bacteria
- (iii) Lytic and lysogenic cycle
- (iv) Artificial and natural classification
- (v) Eusporangiate and Leptosporangiate

- 5 (a) Discuss the Principle of priority with its limitations. Explain the requirement of valid publication of scientific name of plants. (7.5)
- (b) Describe in brief about various modes of reproduction in *Rhizopus*. (7.5)

(2000)

Your Roll No.....

Sr. No. of Question Paper : 1507 D

Unique Paper Code : 2162521101

Name of the Paper : Plant Diversity and Systematics

Name of the Course : B.Sc. (Life Science)

Semester : I

Duration : 2 Hours Maximum Marks : 60

### Instructions for Candidates

- Write your Roll No. on the top immediately on receipt of this question paper.
- Attempt any **Four** questions in all, first question is compulsory.
- All** questions carry equal marks.
- Attempt all parts of the questions together.

1. (a) Fill in the blanks : (1×5=5)

(i) Engler and Prantl's classification is \_\_\_\_\_ system of classification.

P.T.O.

- (ii) Spiral arrangement of the chloroplast is characteristic feature of algae \_\_\_\_\_.
- (iii) \_\_\_\_\_ is also called black bread mold.
- (iv) The \_\_\_\_\_ cycle ends with the death or lysis of the bacterial cell.
- (v) Determinate or monotelic inflorescence is also called \_\_\_\_\_.
- (b) Match the following : (1×5=5)
- |                         |                      |
|-------------------------|----------------------|
| (i) <i>Nostoc</i>       | (a) Cyathium         |
| (ii) <i>Pinus</i>       | (b) Lyso-genic cycle |
| (iii) <i>Marchantia</i> | (c) Heterocyst       |
| (iv) Prophage           | (d) Needle           |
| (v) Euphorbiaceae       | (e) Scales           |
- (c) Define the following (Any five) : (1×5=5)
- |                      |
|----------------------|
| (i) Akinetes         |
| (ii) Isotype         |
| (iii) False indusium |

- (iv) Zygospor
- (v) Spike
- (vi) Elaters
2. (a) Write short notes (Any three) : (3×3=9)
- |                   |
|-------------------|
| (i) APG           |
| (ii) Mycoplasma   |
| (iii) Fairy rings |
| (iv) Dwarf shoot  |
- (b) Explain Bentham and Hooker system of classification. (6)
3. (a) Draw well labelled diagram of the following (Any two) : (2×5=10)
- |                                                         |
|---------------------------------------------------------|
| (i) V.S. thallus of <i>Marchantia</i> through gemma cup |
| (ii) Bacterial cell                                     |
| (iii) Part of magnified coenobium in <i>Volvox</i>      |