

[This question paper contains 4 printed pages.]

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

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt any **Four** questions in all, first question is compulsory.
3. **All** questions carry equal marks.
4. 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) Lysogenic 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) Zygosporangium

(v) Spore

(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 *Marchantia* through gemma cup

(ii) Bacterial cell

(iii) Part of magnified coenobium in *Volvox*

- (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)