

(iv) Type method

(v) Common features of gymnosperms

4. (a) Draw well-labelled diagrams of the following (any **two**) : (2×5=10)

(i) V. S. gill of *Agaricus*

(ii) V.S. of *Marchantia* thallus through gemma cup

(iii) EM of bacterial cell

(b) Interpret the following citations (any **two**) : (2×2.5=5)

(i) *Lupinus* [Tourn.] L.

(ii) *Cerasus cornuta* Wall. ex Royle

(iii) *Vallisneria natans* (Lour.) Hara

5. (a) Enlist the different methods of genetic recombination in bacteria. Explain any one of them. (5)

(b) Give an account of adaptation of land habit in bryophytes. (5)

(c) Give an outline of Bentham & Hooker's System of classification up to series level. (5)

(1000)

[This question paper contains 4 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 1564

I

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.
5. Draw well-labelled diagrams wherever necessary.

P.T.O.

1. (a) Expand the following (any **three**) : (3×1=3)

- (i) Hook.f.
- (ii) A.DC.
- (iii) ICN
- (iv) *nom. nud.*
- (v) *nom. nov.*

(b) Define any **five** of the following terms : (5×1=5)

- (i) Transfusion tissue
- (ii) Mycorrhiza
- (iii) Coenobium
- (iv) Cleistothecium
- (v) Plasmid
- (vi) Heterocysts

(c) Fill in the blanks : (5×1=5)

- (i) Fungal cell wall is predominantly made up of a polysaccharide known as _____.
- (ii) The name of order ends with suffix _____.
- (iii) Trabeculae are present in the sporophyte of _____.

(iv) The alternate name of the family Cruciferae is _____.

(v) Evolutionary history of an organism is known as _____.

(d) What will be the name of the genus commemorating the following persons? (2×1=2)

- (i) Linnaeus
- (ii) Clarke

2. Differentiate between the following (any **three**) : (3×5=15)

- (i) Lytic and lysogenic cycle
- (ii) Raceme and Catkin inflorescence
- (iii) Archaeobacteria and Eubacteria
- (iv) Bryophytes and Pteridophytes
- (v) Natural and artificial system of classification

3. Write short notes on the following (any **three**) : (3×5=15)

- (i) Sexual reproduction in *Rhizopus*
- (ii) Binomial nomenclature
- (iii) Asexual reproduction in *Penicillium*