

This question paper contains 3 printed pages.]

Your Roll No.

501

Subsidiary for B.Sc. Honours/I A
BOTANY – Paper I
(Plant Diversity)
(Admissions of 2003 and onwards)

Time : 3 Hours

Maximum Marks : 50

(Write your Roll No. on the top immediately on receipt of this question paper.)

Attempt any five questions.

All questions carry equal marks.

All parts of a question should be answered together.

1. Fill in the blanks : **10 × 1 = 10**
- (a) Chemoautotrophs obtain their energy by the oxidation of _____.
 - (b) Cubic symmetry is found in _____ virus.
 - (c) _____ is a heterosporous fern.
 - (d) The bacterium that bears at least one flagellum at each pole is called _____ bacterium.
 - (e) The chilgoza pine is the common name of _____.

- (f) Mannitol and Laminarin are the reserve food products of _____.
- (g) The reserve food material in red algae is _____.
- (h) White rust of crucifers is caused by _____.
- (i) Cup or saucer shape fruiting body in fungi is known as _____.
- (j) Asexual reproduction in Marchantia takes place by _____.

2. Draw well-labelled diagrams of any **four** of the following : $4 \times 2\frac{1}{2} = 10$

- (a) Electron micrograph of TMV
- (b) L.S. Capsule of Funaria
- (c) T.S. of Pinus needle
- (d) Basidiocarp of Agaricus
- (e) T.S. Rhizome of Pteris

3. Write short notes on any **four** of the following :

$4 \times 2\frac{1}{2} = 10$

- (a) Sexual reproduction in Vaucheria.
- (b) Male gametophyte in Pinus.
- (c) Characters of Deuteromycetes.
- (d) Important features of viruses.
- (e) Conjugation in bacteria.

4. Discuss any **two** of the following : $2 \times 5 = 10$
- International Code of Botanical Nomenclature.
 - Economic importance of algae.
 - Difference between Gram-positive and Gram-negative bacteria.
5. Differentiate between any **four** of the following : $4 \times 2\frac{1}{2} = 10$
- Acervulus and Sporodochium.
 - Lytic and Lysogenic cycle.
 - Red algae and brown algae.
 - Artificial and natural system of classification.
 - Prokaryotes and Eukaryotes.
6. Describe any **two** of the following : $2 \times 5 = 10$
- Life cycle of any basidiomycete.
 - Characteristics of Pteridophytis.
 - Taxonomic hierarchy.
7. (a) What are the similarities between pteridophytes and gymnosperms ? **3**
- (b) Describe the sporangial development in Rhizopus. **3**
- (c) Sexual reproduction in Polysiphonia. **4**