This question paper contains 4+1 printed pages]

Your Roll No. .....

931

B.Sc. (Hons.)/I C

BOTANY –Paper I

(Introduction to the Plant World and Phycology)

(Admissions of 2004 and onwards)

Time : 3 *Hours* *Maximum Marks* : 38

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

All parts of a question should be answered together.

Illustrate your answers with suitable labelled

diagrams wherever necessary.

Section A

Q. No. **1** is compulsory. Attempt *two* questions

in all from this Section.

1. (*a*) Write botanical names of the plants belonging to :

(*i*) a cyanobacteria

P.T.O.

(*ii*) a pteridophyte

(*iii*) a bryophyte

(*iv*) a gymnosperm

(*v*) an angiosperm. 5×1=5

(*b*) Fill in the blanks : 3

(*i*) An angiosperm plant which completes its life cycle in about two years is termed as ..... .

(*ii*) ..... is a protobiont formed by adding water to protenoids.

2. (*a*) Write botanical name and part used of any *two* of the following :

(*i*) Pea

(*ii*) Maize

(*iii*) Potato. 2×1=2

(*b*) Differentiate between an eukaryotic and a prokaryotic cell. 3

3. (*a*) Describe briefly the Stanley Miller's experiment. What did it prove ? 3

(*b*) Write a short note on three-domain classification of Carl Woese. 2

Section B

Attempt *three* questions in all from this Section. Q. No. 4 is compulsory.

4. (*a*) Write the generic name of the algae associated with : 5×1=5

(*i*) Red snow

(*ii*) Fucosan vesicles

(*iii*) Plakea stage

(*iv*) Coenocytic filament

(*v*) Nannandrium.

(*b*) Fill in the blanks :

(*i*) ..... is the reserve food material found in xanthophyceae.

(*ii*) ..... is a source of agar-agar.

(*iii*) ..... causes red rust of tea.

(*iv*) F.E. Fritsch classified the algae into ..... classes. 4×1=4

5. Write short notes on (any *four*) :

(*a*) Role of algae in biotechnology

(*b*) Chromatic adaptation

(*c*) Diplobiontic life cycle

(*d*) Akinetes

(*e*) Heterocysts. 4×2=8

6. Differentiate between any *four* :

(*a*) Pseudovacuole and sap vacuole

(*b*) Carpospore and tetraspore.

(*c*) Isogamy and Oogamy

(*d*) Conceptacle and receptacle of *Fucus*

(*e*) Heterotrichous and Siphonaceous thallus. 4×2=8

7. (*a*) Describe briefly the life cycle of Hydrodictyon. 4

(*b*) Explain the evolution of sex in chlamydomonas. 3

(*c*) What is phialopore ? What is its significance. 1