[This question paper contains 4 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 1525 **G**

Unique Paper Code : 2162012301

Name of the Paper : Phycology – The World of Algae

Name of the Course : **B.Sc. (Hons.) Botany**

Semester : III

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 **four** questions in all.
3. Question No. **1** is compulsory.
4. Draw well labelled diagrams wherever necessary.

1. (a) Provide a suitable example (genus) of the following **(any five)** : (1×5=5)

   (i) Spermocarp

   (ii) Watermelon algae

   (iii) Red tides

P.T.O.

(iv) Endophytic algae

(v) Wanderplasm

(vi) Cup-shaped chloroplast

(vii) Hormogonia

(b) Fill in the blanks **(any five)** : (1×5=5)

(i) Bioremediation of soil using Blue Green algae was studied by _____ .

(ii) _____ is an example of prokaryotic algae.

(iii) Algal division which do not have any motile stages in their life cycle are _____ and _____ .

(iv) Multinucleate and multiflagellate zoospores are called _____ .

(v) The term algae was coined by _____ .

(vi) The reserve food material of red algae is _____ .

(vii) Having erect and prostrate system in thallus organization is known as _____ .

(c) Match the following : (1×5=5)

(i) Sea lettuce	(a) Diatoms
(ii) Rolling alga	(b) *Sargassum*
(iii) Laminarin	(c) *Ulva*
(iv) Diatomaceous earth	(d) *Dunaliella*
(v) Halophilic alga	(e) *Volvox*

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

(i) Carposporophyte and tetrasporophyte

(ii) Cyanophyceae and Chlorophyceae

(iii) Unilocular and plurilocular sporangia of *Ectocarpus*

(iv) Zoospore and Aplanospore

(v) Nucule and Globule

3. Draw a well labelled diagram of **any three** of the following : (5×3=15)

(i) E.M. of *Chlamydomonas / Chlorella*

(ii) V.S Receptacle of *Sargassum* showing bisexual conceptacles

(iii) Single trichome of *Nostoc*

P.T.O.

(iv) Pennate diatom

(v) Thallus showing sex organs of *Vaucheria*

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

(i) Asexual reproduction in *Volvox*

(ii) Criteria of classification by Fritsch

(iii) Evolutionary significance of *Prochloron*

(iv) *Chlamydomonas* as model system

(v) Significant contributions of R.N. Singh and M.O.P. Iyengar

5. (a) What are phycocolloids. Give their economic importance with suitable examples. (7)

(b) Explain the cell division in *Oedogonium*. Give an account of the special features and sexual reproduction in *Oedogonium*. (8)

(or)

Define ocean acidification. Discuss ecological importance of algae. (8)