This question paper contains **4** printed pages]

**Roll No.** | | | | | | | | | | | |

S. No. of Question Paper : **1771**

Unique Paper Code : **32161101** **GC-3**

Name of the Paper : **C.C.-1 Microbiology and Phycology**

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

Semester : **I**

Duration : **3 Hours** Maximum Marks : **75**

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

Attempt *five* questions in all.

Question No. **1** is compulsory.

Supplement your answers with diagrams wherever necessary.

1. (*a*) Fill in the blanks : 5×1=5

(*i*) Viral particles occurring in nature without capsid are ..... .

(*ii*) The extrachromosomal DNA in bacteria is known as ..... .

(*iii*) Floridean starch is the reserve food material in the members of division ..... .

(*iv*) ..... is a green alga with distinct nodes and internodes.

(*v*) Plurilocular sporangia are found in ..... .

P.T.O.

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

(*i*) Aplanospore

(*ii*) Hormogonia

(*iii*) Conjugation

(*iv*) Cystocarp

(*v*) Virion

(*vi*) Spheroplast

(*vii*) Phycobilisomes.

(*c*) Match the terms given in Column A with those in Column B : 5×1=5

| **Column A** | **Column B** |
|---|---|
| (*i*) Coenobium | (*a*) Bacteriophage |
| (*ii*) Gonimoblast filaments | (*b*) *Volvox* |
| (*iii*) Coenocyticthallus | (*c*) Bacteria |
| (*iv*) Peptidoglycan | (*d*) *Vaucheria* |
| (*v*) Capsid | (*e*) *Polysiphonia* |

2. Differentiate between any *five* of the following : 5×3=15

(*i*) L form and Mycoplasma

(*ii*) Isogamy and Oogamy

(*iii*) Conceptacle and Receptacle

(*iv*) Gongrosira stage and Palmella stage

(*v*) Zoospore and Androspore of *Oedogonium*

(*vi*) Unilocular and plurilocular sporangia.

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

(*i*) Tobacco mosaic virus

(*ii*) Sexual reproduction in *Vaucheria*

(*iii*) Economic importance of bacteria

(*iv*) Criteria for classification of algae.

4. Draw well labelled diagrams of the following : 3×5=15

(*i*) Female conceptacle of *Fucus*

(*ii*) E.M. of *Chlamydomonas*

(*iii*) $T_2$ bacteriophage.

5. (*a*) Discuss briefly the role of algae in Industry. 5

(*b*) Describe the structure of heterocyst in *Nostoc*. 5

(*c*) With the help of diagrams describe the life cycle of *Polysiphonia*. 5

6. (*a*) Write *two* important contributions of each of the following : 3

(*i*) F.E. Fritsch

(*ii*) M.O.P. Iyengar.

(*b*) Differentiate between : 2×6=12

(*i*) Lytic and Lysogenic cycles of viruses

(*ii*) Archaebacteria and Eubacteria.

7. Briefly discuss the following : 3×5=15

(*a*) Role of blue-green algae in biotechnology

(*b*) Structure of nucule and globule of *Chara*

(*c*) Daughter colony formation in *Volvox*.