his question paper contains 4 printed pages.]

Your Roll No.....

. No. of Question Paper : 32 **I**

nique Paper Code : 32161101

me of the Paper : Microbiology and Phycology

me of the Course : **B.Sc. (Honours) Botany**

mester : I

uration : 3 Hours Maximum Marks : 75

structions for Candidates

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

Attempt **any five** questions including Question No. 1 which is compulsory.

(a) Fill in the blanks : (1×10=10)

(i) ..... is an example of prokaryotic alga.

(ii) Iodine is derived from .....

(iii) ..... is an unicellular motile green alga.

(iv) Transduction in bacteria was described by .....

(v) Largest animal virus is .....

P.T.O.

(vi) Biogas can be produced with the help o ..... bacteria

(vii) ..... is the reserve food material of Re algae.

(viii) Colony of *Volvox* is calledas .....

(ix) Female gametangia in *Polysiphonia* is know as .....

(x) Unilocular sporangia is found in .....

(b) Define the following : (1×7=7)

(i) Gongrosira stage

(ii) Fimbriae

(iii) Virusoids

(iv) Hormogonia

(v) Stigma

(vi) Akinetes

(vii) Synzoospores

(c) Explain the following terms : (2×5=10)

(i) Cap cells

(ii) Heterotrichous thallus

(iii) Chemoorganotrophs

(iv) Palmella stage

(v) Attenuated vaccines

Write notes on the following : (3×4=12)

(a) Formation of daughter colonies in *Volvox*

(b) Internal organization of thallus in *Fucus*

(c) Mycoplasma

(d) Structure of TMV

Draw well labelled diagrams of the following : (3×4=12)

(a) EM of *Chlamydomonas*

(b) VS of endospore

(c) EM of bacteriophage

(d) Sex organs of *Chara*

Differentiate between the following : (3×4=12)

(a) Lytic and lysogenic cycle

(b) Gram positive and Gram negative bacteria

(c) Cyanophyceae and Phaeophyceae

(d) Prions and viroids

5. Explain any **three** of the following : (4×3=1

(a) Replication of bacteriophage

(b) Alternation of generation in *Polysiphonia*

(c) Conjugation in bacteria

(d) Sexual reproduction in *Ectocarpus*

6. Discuss any **three** of the following : (4×3=1

(a) Evolutionary significance of *Prochloron*

(b) Significant contributions of F E Fritsch or H D Kum

(c) Role of virus in biotechnology

(d) General features of Chlorophyceae

7. Explain briefly any **two** of the following : (6×2=1

(a) Special features of Baltimore classification of virus

(b) Macrandrous and Nanandrous species of *Oedogoniu*

(c) Economic importance of algae