11.12.18 (E)

[This question paper contains 4 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 835 **I**

Unique Paper Code : 32165101

Name of the Paper : Biodiversity (Microbes, Algae, Fungi &Archegoniatae)

Name of the Course : **Botany : G.E. for Honours**

Semester : I

Duration : 3 Hours Maximum Marks : 75

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt **five** questions in all.
3. Question No. **1** is compulsory.
4. All parts of a question must be answered together.
5. Draw well-labelled diagrams wherever necessary.

1. (a) Give an appropriate term for each of the following definitions (**any five**) : (1×5=5)

   (i) Cup - shaped chloroplast is present in which genera studied by you?

   (ii) A bacterial association in the form of an irregular bunch of cells is called.

P.T.O.

(iii) Phenomenon of frequent appearance of mushrooms in circles on ground.

(iv) Long, cylindrical, unbranched and leafless structure arising from the lower side of stem at the point of dichotomy in *Selaginella*.

(v) Bryophyte with multicellular, branched and oblique septa in rhizoids.

(vi) Fleshy, negatively geotropic and dichotomously branched specialized roots in *Cycas*.

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

(i) Agar agar is obtained from .....

(ii) ..... is the extrachromosomal DNA found in bacterium.

(iii) In *Penicillium* the conidia are arranged in ..... manner.

(iv) In *Marchantia*, specialized branch bearing female sex organ is called .....

(v) Name a homosporous pteridophyte studied by you .....

(vi) The upcurved sterile portion of the microsporophyll of *Cycas* is called .....

(vii) Members of archegoniatae possess ..... for protection of sex organs.

(c) Match the following : (1×5=5)

(i) Bacteria	(a) Stolon
(ii) Coenocytic thallus	(b) *Pteris*
(iii) Accessory transfusion tissue	(c) *Vaucheria*
(iv) Coenosorus	(d) Peptidoglycan
(v) *Rhizopus*	(e) *Cycas* leaflet

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

(a) Lytic and lysogenic cycle

(b) Carposporophyte and tetrasporophyte of *Polysiphonia*

(c) Ectomycorrhizae and endomycorrhizae

(d) Bryophytes and Pteridophytes.

(e) Male cone of *Cycas* and *Pinus*

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

(a) Structure of T_4 bacteriophage

(b) EM of *Chlamydomonas*

(c) V.S. *Triticum* leaf passing through teleutosorus of *Puccinia*

(d) L.S. *Equisetum* strobilus

(e) L.S. *Cycas* ovule

P.T.O.

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

(a) Conjugation in bacteria

(b) External features of *Fucus* thallus

(c) Morphological types of lichens

(d) Adaptations to land habit

(e) Characteristic features of gymnosperms

5. (a) With the help of suitable diagrams explain the life cycle of nannandrous species of *Oedogonium.* (5)

(b) Discuss the ecological and economic significance of lichens. (5)

(c) Briefly discuss the types of steles in Pteridophytes. (5)

6. (a) What is heterospory? Explain how heterospory has led to evolution of seed habit? (5)

(b) List the differences between first, second and third year female cone of *Pinus.* (5)

(c) Discuss in detail the economic importance of Viruses. (5)