

THE OPEN UNIVERSITY OF SRI LANKA

B.Sc./B.Ed. DEGREE PROGRAMME – LEVEL 03 - 2007/2008

BTU 1201/BTE 3201 - PLANT DIVERSITY

ASSESSMENT TEST I (OPEN BOOK TEST)

DURATION : ONE (01) HOUR.



REGISTRATION NO. ....

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DATE : 23<sup>rd</sup> February 2008

TIME: 11.30 a.m. – 12.30 p.m.

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Answer all questions.

Questions should be answered on the question paper itself. There are three (03) questions and four (04) pages in the question paper.

01. Give the most appropriate term/terms for each of the following.
1. The specialized cells in some cyanobacteria for the function of Nitrogen fixation .....
  2. The female sex organs of *Eurotium* .....
  3. Fungi that are symbiotically associated with beetles throughout their life cycle .....
  4. The antibiotic extracted from *Chlorella* .....
  5. The spores that are produced within some bacterial cells .....
  6. Small coiled circular pieces of DNA that exist alongside the bacterial chromosome.....
  7. The structure that helps attach *Capnodium* to the surface of the host leaves.....
  8. The group of fungi prefer to grow on animal dung .....

9. The specialized basal cell of some filamentous algae. Which fixes the filament to the substrate .....
10. Symbiotic associations between bacteria and the roots of higher plants .....
11. An open saucer-shaped ascocarp found in some members of Ascomycetes.....
12. The point at which the semicells of Desmids are joined together.....
13. The sexual spores produced by the members of Basidiomycotina .....
14. The process of taking up of a short piece of naked strand of DNA into a recipient bacterial cell .....
15. Unicellular female gametangium found in red algae .....
16. The most important group of algae in the Division of Chrysophyta.....
17. The substance extracted from *Gelidium* and used extensively in the preparation of culture media.....
18. Differentiation of the multicellular filamentous plant body of some algae into two systems .....
19. The first phase of the process of sexual reproduction in fungi .....
20. The major component of viruses .....

02. Given below includes both true and false statements. Indicate the true statements by writing the letter 'T' and false statements by writing the letter 'F' in the space given against each statement.

1. Viruses lack the minimum requirement of a cell and hence they are referred as acaryotic .....
2. *Plasmopara* which causes 'downy mildew' on a variety of crop plants is an obligate parasite. ....
3. Bacteria are important as pioneers in many successions and as nitrogen fixers .....
4. *Gloeosporium* causes anthracnose spots on banana fruits. ....
5. Most bacteria are heterotrophic, but a few forms are autotrophic .....
6. In *Oedogonium* a single sporangium produces a single zoospore .....
7. Pennate diatoms show radial symmetry .....
8. The green alga *Cephaleuros parasiticus* is found as an algal component in some lichens .....
9. The cultivation of *Chlorella* in obtaining single cell proteins is fast becoming popular .....
10. *Gonium* is the most simple form of motile coenobium in green algae .....
11. Ascomycetes can be considered as the most advanced group of fungi .....

- 12. The red algae are the only algae that lack motile cells. ....
- 13. Zoospores of *Cladophora* are quadriflagellate .....
- 14. The nucleic acid in some viruses is single – stranded DNA .....
- 15. *Chlorobium* is an example for a cyanobacterium. ....

03. Give two (02) main differences between the following. No diagrams are required.

1. Heterocysts and akinetes of cyanobacteria

Heterocysts

Akinetes.

- |         |       |
|---------|-------|
| 1 ..... | ..... |
| .....   | ..... |
| 2. .... | ..... |
| .....   | ..... |

2. Primary and secondary mycelia of *Agaricus*

Primary mycelium

Secondary mycelium

- |         |       |
|---------|-------|
| 1 ..... | ..... |
| .....   | ..... |
| 2. .... | ..... |
| .....   | ..... |

3. Transduction and conjugation in bacteria

- |         |       |
|---------|-------|
| 1 ..... | ..... |
| .....   | ..... |
| 2. .... | ..... |
| .....   | ..... |