## FOURTH SEMESTER B.Sc. DEGREE EXAMINATION, APRIL/MAY 2015

(UG-CCSS)

Core Course—Botany

BO 4B 04—MICROBIOLOGY, MYCOLOGY, PHYCOLOGY, LICHENOLOGY AND PLANT PATHOLOGY

(2012 Admission onwards)

Time : Three Hours

Maximum : 30 Weightage

I. Objective Type Questions. Answer all questions.

- 1 The chlorophyll common to all algae is :
  - (a) Chlorophyll b. (b) Chlorophyll c.
  - (c) Chlorophyll a. (d) Chlorophyll d.
- 2 Marine algae are under the group :
  - (a) Rhodophyceae. (b) Chlorophyceae.
  - (c) Cyanophyceae. (d) None of the above.

## 3 Algae found in snow are called :

- (a) Thermophytes. (b) Lithophytes.
- (c) Cryophytes. (d) Epiphyte.
- 4 Multiflagellated zoospores are found in :
  - (a) Oedogonium and Volvox.
  - (b) Volvox and Vaucheria.
  - (c) Oedogonium and Vaucheria.
  - (d) Sargassam and Vaucheria.

## Fill in the blanks :

5 The site of N<sub>2</sub> fixation in Cyanophyceae is \_\_\_\_\_

6 Fungi that is called 'Fungi Imperfecti' is \_\_\_\_\_

7 Blast of rice is caused by

8 \_\_\_\_\_is the control of import and export of plants to spread disease and pest.

Answer in a word :

- 9 Conversion of fixed form of Nitrogen to molecular Nitrogen is called :
- 10 The protein coat present in the viruses :
- 11 Virus that attack bacteria are called :
- 12 Citrus canker is caused by :

 $(12 \text{ x} \frac{1}{4} = 3 \text{ weightage})$ 

II. Short answer Questions. (Answer all nine questions)

13 What is cyphellae?

14 Define stroma.

15 What are the different control measures of plant pathogens ?

16 Briefly explain the structure of TMV.

17 What are the main characteristics of viruses?

18 Write the differences between viroids and prions.

- 19 Describe how algae can be used as pollution indicators.
- 20 Explain range of **thallus** structure in **chlorophyceae** with a special mention on the variation of **chloroplast** in **chlorophyceae**.
- 21 Auxospores.

(9 x 1 = 9 weight)

III. Short essay Questions. Answer any five questions :

- 22 Give an account on different types of bacterial pure culture techniques.
- 23 Structure of mature basidiocarp in Agaricus.
- 24 Describe about symbiotic and non- symbiotic Nitrogen fixation.

25 Give an account on black rust of wheat.

26 Bring out the structure of female sex organ in Chara.

- 27 Explain nannandrous type of sexual reproduction in oedogonium.
- 28 Reproduction in lichens.

 $(5 \ge 2 = 1)$ 

IV. Essay questions. Answer any two questions :

29 What are the economic importances of bacteria?

30 Give an account on economic importance of fungi.

31 The life cycle of **Polysiphonia** is **diplobiontic** type, explain the statement w ired illustration.

(2 x 4 = t, ubc)