

B. Sc. (Part I) EXAMINATION, 2017

MICROBIOLOGY

Paper Third

(Algae, Fungi and Plant Pathology)

Time : Three Hours

Maximum Marks : 50

Note : Attempt all questions.

1. Objective Type Questions : 1 each

(i) Which of the following has prokaryotic cell ?

- (a) Nostoc
- (b) Chlamydomonas
- (c) Volvox
- (d) Polysiphonia

(ii) Heterocysts are found in :

- (a) Rhodophyceae
- (b) Phaeophyceae
- (c) Myxophyceae
- (d) Chlorophyceae

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- (iii) Nitrogen fixation in soil is caused by :
- (a) Green algae
 - (b) Red algae
 - (c) Blue-green algae
 - (d) None of the above
- (iv) Agra-Agar is manufactured from :
- (a) Spirogyra
 - (b) Gelidium
 - (c) Ectocarpus
 - (d) Chara
- (v) The branch of science that studies fungi is known as :
- (a) Phycology
 - (b) Mycology
 - (c) Microbiology
 - (d) Plant Pathology
- (vi) The name of artificial class of fungi is :
- (a) Deuteromycetes
 - (b) Ascomycetes
 - (c) Basidiomycetes
 - (d) Phycomycetes
- (vii) The common food stored in fungi is :
- (a) Oil
 - (b) Fat
 - (c) Starch
 - (d) Glycogen

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(viii) Which is smut fungi in the following ?

- (a) *Puccinia*
- (b) *Ustilago*
- (c) *Alternaria*
- (d) *Cystopus*

(ix) Most of the Lichens are composed of :

- (a) Green algae and fungi
- (b) Green algae and ascomycetes
- (c) Green algae and phycomycetes
- (d) Blue-green algae and ascomycetes

(x) Prophylaxis involves :

- (a) Killing of diseased plants
- (b) Preventing contact with diseased plant
- (c) Spraying fungicides
- (d) Biological control of plant disease

2. Differentiate any *four* of the following : $2\frac{1}{2}$ each

- (i) Haploid and diploid life cycle in algae
- (ii) Unicellular thallus and Filamentous thallus
- (iii) Septate mycellium and Aseptate mycelium
- (iv) Endospore and Exospore
- (v) Monocyclic and Polycyclic disease
- (vi) Ectomycorrhiza and Endomycorrhiza

3. Write short notes on any *five* of the following : 3 each

- (i) Symbiotic algae

- (ii) Asexual reproduction in algae
- (iii) Algae as water pollutants
- (iv) Hanstorium
- (v) Ultrastructure of fungal cell
- (vi) Lichens
- (vii) Nutrition in fungi
- (viii) Chemical control of plant diseases

4. Answer any *three* of the following : 5 each

- (i) Describe the range of thallus organization in algae.
- (ii) Write an essay on economic importance of algae.
- (iii) Give an outline of any classification of fungi studied by you.
- (iv) Describe the symptoms, causal organism and control of following plant diseases :
 - (a) Late blight of potato
 - (b) White rust of crucifer
 - (c) Black rust of wheat

Or

- (d) Early blight of potato
- (v) Describe the life-cycle of any fungi studied by you.