

2015

**BOTANY**

Paper : 101 (Old Course)

**DIVERSITY AND SYSTEMATIC OF LOWER  
CRYPTOGAMS**

Full Marks : 80

Time : 3 hours

*The figures in the margin indicate full marks for the questions*

1. Answer the following questions:

(All questions are compulsory)

1x7=7

- i. What are the components of fungal cell wall?
- ii. What are prions? Name one disease caused by prions.
- iii. Thecoic acids are found in.....Bacteria.
- iv. Name one green alga which is a parasite in higher plants.
- v. One of the antibiotics produced by Actinomycetes is.....
- vi. Fungi carry out external digestion  
a) True b) False
- vii. Motile Flagellated cell amongst Algae is absent in which algal groups?  
(a) Cynophyceae, Rhodophyceae  
(b) Chlorophyceae, Xanthophyceae  
(c) Clorophyceae, Crysophyceae

(1)

**P.T.O.**

(d) Pheophyceae, Xanthophyceae

2. Answer the following short questions: (All questions are compulsory)  $2 \times 7 = 14$

- i. Write the difference between genetic material of prokaryotic and eukaryotic cells.
- ii. Write the functions of eye spot and pyrenoid in algal cell?
- iii. What are mycoparasites? Give one example.
- iv. What are interferons?
- v. Distinguish between viroids and virus.
- vi. Give two characteristic features of Archeabacteria.
- vii. What are the different groups of lichen according to their habit?

3. Write explanatory notes: (Any four)  $5 \times 4 = 20$

- i. Wood decaying Fungi
- ii. Various types of food material and pigments found in algae
- iii. Tobacco mosaic Virus
- iv. Evolution of sex in Algae
- v. Heterothallism in Fungi

4. Answer any three of the following:

- i. Write the salient features of Rhodophyta. Differentiate between the diphasic and triphasic life cycle of Rhodophyta with suitable diagram.  $3 + 5 + 1 = 9$

(2)

P.T.O.

ii. Compare and contrast the cell wall of gram positive and gram negative bacteria. Include labeled drawing in your description.  $6 + 3 = 9$

iii. List and describe various types of cell inclusions found in bacterial cell. Give similarities and dissimilarities of cell inclusions of bacteria with that of eukaryotic organelles like mitochondria and chloroplast.  $6 + 3 = 9$

iv. What do you understand by Heteroecious Fungi? Distinguish between microcyclic and macrocyclic rust. Write the different stages of macrocyclic rust Fungus?

$1 + 3 + 5 = 9$

9. Write short notes: (Any four)

$4 \times 3 = 12$

- a) Types of Mycorrhizae and its significance.
- b) Role of Algae in Eutrophication and Algal blooms.
- c) Industrial uses of Fungi
- d) Economic and ecological significance of Lichens.
- e) Rickettsia

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