

[Time: Three Hours]

[Marks: 100]

Please check whether you have got the right question paper.

- N.B:** i) All questions are compulsory
 ii) Figures to the right indicate full marks
 iii) Draw neat and labeled diagrams whenever necessary

Q.1

A. Choose the **correct option** from the following:

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- a) The study of algae is known as _____.
 i) Mycology ii) Bryology iii) Phycology iv) Parasitology
- b) _____ is the reserve food material in *Nostoc*.
 i) Starch ii) Glycogen iii) Oil globules iv) Cyanophycean starch
- c) The outer layer of *Spirogyra* cell wall is made up of _____.
 i) cellulose ii) lignin iii) suberin iv) pectin
- d) Cytoplasm of *Rhizopus* hyphae is _____.
 i) uninucleate ii) binucleate iii) trinucleate iv) multinucleate
- e) The fruiting body of *Aspergillus* is known as _____.
 i) Apothecium ii) Perithecium iii) Cleistothecium iv) Endothecium
- f) _____ are sexual spores of fungi
 i) Conidia ii) Aplanospores iii) Ascospores iv) Zoospores
- g) Coenocytic mycelium is characteristics of class _____.
 i) Ascomycetae ii) Basidiomycetae iii) Phycomycetae iv) Deuteromycetes
- h) *Riccia* spermatozoid possesses _____ flagella.
 i) one ii) two iii) three iv) four
- i) The sporophyte of liverwort is _____.
 i) fully independent ii) partially independent iii) parasitic iv) symbiotic
- j) The neck of *Riccia* archegonia consists of a vertical row of _____ neck canal cells.
 i) one ii) two iii) three iv) four

B. Answer the following in **one sentence**:

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- a) Give two examples of unicellular algae.
 b) State the role of heterocyst of *Nostoc*.
 c) Define saprophytism.
 d) Write functions of scales in *Riccia*.
 e) What are nurse cells ?

- Q.2 Answer **any two** from the following : 20
- Describe sexual reproduction in *Spirogyra*.
 - Give an account on range of thallus in Chlorophyta
 - Describe the structure of colony, single filament and cell structure of *Nostoc*.
 - Discuss different types of vegetative and asexual reproduction in Chlorophyta.
- Q.3 Answer **any two** from the following: 20
- Give an account of general characters of Phycomycetes.
 - Describe asexual reproduction in *Aspergillus*. Add a note on its systematic position.
 - Explain life cycle of *Rhizopus* with the help of a schematic diagram.
 - Give an account of beneficial activity of fungi.
- Q.4 Answer **any two** from the following: 20
- Describe V.S of *Riccia* thallus. Add a note on its systematic position.
 - Give a detailed account of general characters of Hepaticae.
 - Describe the internal structure of sporophyte in *Riccia*. Add a note on its spore structure and germination.
 - Give the systematic position of *Riccia* and describe various modes of vegetative reproduction in it.
- Q.5 Write short notes on (**any four**): 20
- Algae used as food and fodder
 - Vegetative cell of *Spirogyra*
 - Parasitism
 - Thallus structure of *Rhizopus*
 - Riccia* antheridium
 - Alternation of generation in *Riccia*