

[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: **10**

- The chloroplast in *Spirogyra* is _____ shaped.
 i) disc ii) cup iii) spiral iv) star
- _____ is not the type of conjugation in *Spirogyra*.
 i) Looping ii) Lateral iii) Reticulate iv) Scalariform
- Chlorophyta contains _____ as main pigments.
 i) Chlorophyll a & b ii) Chlorophyll a & c iii) Chlorophyll b & d
 iv) Chlorophyll b & c
- Nostoc* reproduces by _____ methods.
 i) vegetative and asexual ii) vegetative and sexual
 iii) vegetative, sexual and asexual iv) sexual and asexual
- Fruiting body of *Aspergillus* is called _____.
 i) Apothecium ii) Cleistothecium iii) Perithecium iv) Epithecium
- Mass of white, cottony threads of fungi are called _____.
 i) mycelium ii) columella iii) sporangium iv) conidium
- Rhizopus* belongs to order _____.
 i) Mucorales ii) Aspergillales iii) Erysiphales iv) Pucciniales
- The aquatic species of *Riccia* is _____.
 i) *Riccia discolor* ii) *Riccia fluitans* iii) *Riccia himalayensis* iv) *Riccia alba*
- _____ represents the main plant body of *Riccia*.
 i) Sporophyte ii) Gametophyte iii) Sporophyte on Gametophyte
 iv) None of the above
- Riccia* reproduces vegetatively by _____.
 i) fragmentation ii) tuber formation iii) persistent apices iv) all of the above

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

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- What is coenobium ?
- What is coenocytic mycelium ?
- Define haustoria.
- Why bryophytes are called amphibians of plants kingdom ?
- State the functions of heterocyst.

Q 2 Answer **any two** from the following :

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- Describe vegetative cell structure of *Spirogyra*. Add a note on its systematic position.
- Write a detailed note on range of thallus in chlorophyta.
- Explain reproduction in *Nostoc*.
- Write an account on alternation of generations in chlorophyta.

Q.3 Answer **any two** from the following:

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- Give the beneficial aspects of fungi.
- Describe the modes of nutrition in fungi.
- Explain asexual reproduction of *Aspergillus* in detail.
- Discuss sexual reproduction in *Rhizopus*.

Q.4 Answer **any two** from the following:

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- Describe the structure of sex organs in *Riccia*.
- Write a detailed account on general characters of Hepaticae.
- Give the systematic position and describe the external morphology of *Riccia*.
- Describe V.S. of thallus of *Riccia*.

Q.5 Write short notes on (**any four**):

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- Algae as biofertilizers
- Alginates
- Thallus structure of *Rhizopus*
- Systematic position of *Aspergillus*
- Fertilization in *Riccia*
- Types of rhizoids in *Riccia*