

2016

BOTANY

(Major)

Paper : 1.1

Full Marks : 60

Time : 3 hours

The figures in the margin indicate full marks
for the questions

1. Fill in the blanks with appropriate word(s) :

1×7=7

- (a) Leaf-like structure of multicellular alga is called _____.
- (b) In *Coleochaete*, the oogonium bears a protuberance called _____.
- (c) Algin, a thickener, used in ice cream and cake decoration is extracted from _____ algae.
- (d) _____ is the reserved food material found in Cyanophyceae.

- (e) Function of haustoria in fungi is ____.
- (f) Crozier formation is observed in ____.
- (g) Reserved food material in plants is ____.

2. Define the following terms : $2 \times 4 = 8$

- (a) Teleomorph
- (b) Anisogamy
- (c) Phylogeny
- (d) Symbiosis

3. Write briefly on any three of the following : $5 \times 3 = 15$

- (a) Haplodiplontic life cycle
- (b) Degeneration of sex in fungi
- (c) Algal bloom
- (d) Lichen
- (e) Lithotrophs

4. Answer any three of the following : $10 \times 3 = 30$

- (a) Discuss the utility of pigments and reserved food materials in the classification of algae.

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(Continued)

- (b) Explain the thallus cycle of *Volvox* with

- (c) Write the system economic importance of *Saccharomyces*. Give representation of *Saccharomyces* with

- (d) Give an outline of nutrition found in suitable examples.

- (e) What are the distinctive features of Cyanophyceae? Give ecological and agricultural importance of blue-green algae.

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(Major)

Paper : 1.2

Full Marks : 60

Time : 3 hours

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for the questions

1. Choose the correct answer : $1 \times 7 = 7$

(a) Elaters in bryophytes help in

- (i) assimilation of CO_2
- (ii) dispersal of spores
- (iii) vegetative reproduction
- (iv) sexual reproduction

(b) Which of the following steles is
considered to be the most primitive?

- (i) Haplostele
- (ii) Plectosteles
- (iii) Solenosteles
- (iv) Dictyosteles

(c) Presence of peltate sporangium is a characteristic feature of

- (i) Lycopsidea
- (ii) Pteropsida
- (iii) Sphenopsida
- (iv) Psilopsida

(d) Elongated sporogonium is a characteristic of

- (i) *Riccia*
- (ii) *Marchantia*
- (iii) *Sphagnum*
- (iv) *Anthoceros*

(e) Which of the following bryophytes shows *Nostoc* colonies in the thallus?

- (i) *Riccia*
- (ii) *Marchantia*
- (iii) *Sphagnum*
- (iv) *Anthoceros*

(f) *Sphagnum* is commonly known as

- (i) reindeer moss
- (ii) cow moss
- (iii) common moss
- (iv) peat moss

(g) Which of the following does not occur in *Selagin*?

- (i) Ligule
- (ii) Ramenta
- (iii) Trabecula
- (iv) Rhizophore

2. Distinguish between the

- (a) Eusporangiate and types of development
- (b) Prothallus and Prot
- (c) Haplostele and Mix
- (d) Homospory and Het

3. Write short notes on following :

- (a) Heterospory and se
- (b) Sporocarp of *Marsilia*
- (c) Water absorption mechanism in *Spha*
- (d) Economic importance
- (e) Rhizophore of *Selagin*

4. Answer the following questions : $10 \times 3 = 30$

- (a) Give an account of the morphology and reproduction of *Psilotum nudum*. 10

Or

Discuss the telome theory of evolution of sporophyte.

- (b) What is meant by alternation of generation? Explain with reference to the life history of *Polytrichum*. $2+8=10$

Or

Give a comparative account on the sporophytes of *Riccia*, *Marchantia* and *Anthoceros*. 10

- (c) Give a general account on various methods of spore dispersal in bryophytes. 10

Or

Compare and contrast among the spore-bearing organs of *Lycopodium*, *Selaginella* and *Equisetum* with labelled diagrams.
