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2 SEM TDC BOT M 1

2019

(May)

BOTANY

(Major)

Course : 201

(Plant Pathology and Bryophytes)

Full Marks : 48

Pass Marks : 19/14

Time : 2 hours

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

1. (a) Answer the following as directed : $1 \times 4 = 4$

(i) Central and sterile column in moss capsule is

1. annulus
2. apophysis
3. columella
4. peristome

(Choose the correct option)

(2)

(ii) In which of the following, sporangium is having nurse cells?

1. *Anthoceros*
2. *Riccia*
3. *Marchantia*
4. *Sphagnum*

(Choose the correct option)

(iii) The important active ingredients of ergot causing ergotism are constituted by

1. alkaloids
2. nucleic acids
3. phenols
4. antibiotics

(Choose the correct option)

(iv) The plant diseases which spread widely but occur periodically are called ____.

(Fill in the blank)

(b) Write short notes on the following :

$$2\frac{1}{2} \times 4 = 10$$

- (i) Endemic and epidemic diseases
- (ii) Hypoplastic and hyperplastic symptoms

(3)

(iii) Peristome teeth and its function

(iv) Sporophyte of *Riccia*

2. Answer either [(a) and (b)] or [(c) and (d)] of the following :

$$5 \times 2 = 10$$

- (a) Describe briefly about different methods of post-harvest plant disease management.
- (b) Give a brief account on the ecological and economic importances of Bryophyta.
- (c) Describe various methods by which pathogens are disseminated.
- (d) "Sporophyte of *Anthoceros* is regarded as highly evolved." Justify the statement.

3. Mention the symptoms, name of causal organism, disease cycle and control measures of the following diseases (any two) :

$$(1+1+2+2) \times 2 = 12$$

- (a) Grey blight of tea
- (b) Rust of wheat
- (c) Mosaic disease of tobacco
- (d) Ergot of rye

4. Give a comparative account of the capsular structures of *Marchantia*, *Anthoceros* and *Polytrichum*. Comment on their mode of spore dispersal.

$$7\frac{1}{2} + 4\frac{1}{2} = 12$$

Or

Describe with sketches the life history of *Polytrichum* spore dispersal mechanism and indicate its evolutionary importance.

$$2 + 6 + 2 + 2 = 12$$

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