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(May)

BOTANY

(Major)

Course : 201

(Plant Pathology and Bryophytes)

Full Marks : 48

Pass Marks : 19

Time : 2 hours

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

1. (a) Write the correct answer of the following : 1×2=2
- (i) An antagonistic condition in which there is a suppression of pathogenic microorganism is called exploitation / competition / antibiosis / None of the above.
- (ii) The sporophyte of *Marchantia* is composed of only foot / only seta / only capsule / All of the above.

(b) Fill in the blanks of the following : $1 \times 2 = 2$

(i) The establishment of the pathogen in the host tissue after penetration is called —.

(ii) *Sphagnum* is commonly called '— moss'.

2. Answer the following : $2\frac{1}{2} \times 4 = 10$

(a) Why is systemic disease more harmful than localized disease?

(b) Distinguish between sporadic and endemic diseases.

(c) Write on gametophyte of *Riccia*.

(d) Write on distribution of bryophytes in India.

3. Answer either (a) and (b) or (c) and (d) of the following :

(a) What are toxins? Classify them and mention their role in plant pathology.

1+2+2

(b) "The sporophyte of *Riccia* is the simplest among the bryophytes." Justify the statement.

5

(c) Write an account on different types of chemical for controlling plant diseases.

What is 'quarantine regulation'?

4+1

(d) Comment upon the features of special interest of the sporophyte of *Anthoceros*.

Write its systematic position. 4+1

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

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

(a) Ergot of rye

(b) Rust of wheat

(c) Grey blight of tea

(d) Mosaic disease of tobacco

5. Give a comparative account of the gametophytes of *Sphagnum* and *Polytrichum* with neat labelled diagrams. Also mention the evolutionary characteristics observed in the sporophyte of *Polytrichum*.

6+4+2

Or

Write briefly the spore dispersal mechanisms in bryophytes giving more emphasis on the members of moss group you have studied. 6+6
