2 SEM TDC BOT M 1

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(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 as directed : 1×4=4

    (i) The plant diseases which spread widely but occur periodically are called ——.

    (Fill up the blank)

    (ii) Write the name of the causal organism of the disease 'late blight of potato'.

    (iii) The sporophyte of *Riccia* is composed of only foot / only seta / only capsule / All of the above.

    (Choose the correct option)

(*Turn Over*)

(iv) In Moss, a special ring-like layer of epidermal cells, lying around the capsule at the base of the operculum.

(Express in one word)

(b) Write short notes on the following :

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

(i) Susceptibility and immunity of a plant towards pathogen

(ii) Symptoms of localised and systemic diseases

(iii) Distribution of Bryophytes in India

(iv) Gametophytes of *Marchantia*

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

(a) What do you mean by host-parasite relationship? Discuss briefly about the post-penetration stages caused by plant pathogens. $1+4=5$

(b) "The sporophyte of *Riccia* is the simplest among the Bryophytes." Justify the statement. 5

(c) Write briefly various physical and cultural methods of plant disease management. $2\frac{1}{2}+2\frac{1}{2}=5$

(d) Draw and describe the sporophyte of *Anthoceros* and state its evolutionary importance in Bryophyte. $4+1=5$

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

4. Write briefly the spore dispersal mechanisms in Bryophytes giving more emphasis on the members of Moss group you have studied.

$$6+6=12$$

Or

Describe with sketches the life history of *Polytrichum* and indicate its evolutionary importance. $3+7+2=12$

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