



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. Answer as directed : 1×4=4

(a) The invasion of the host tissue by the living microorganism is called —.

(Fill up the blank)

(b) Write the name of the causal organism of the disease 'Grey blight of tea'.

(c) The structure which is developed as a result of enlargement of the basal portion of the archegonium of

( 2 )

Bryophyta to form a protective envelope for young embryo is called calyptra/perigynium/integument/rostrum.

(Choose the correct option)

- (d) In *Sphagnum*, the sex organs are borne on special short branches near the apex of the gametophyte.

(Express in one word)

2. Write short notes on the following :  $2\frac{1}{2} \times 4 = 10$

- (a) Localised and systemic infections with one example of each type  
(b) Post-harvest management  
(c) Rhizoids of bryophytes  
(d) Columella of moss and its function

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

- (a) Name various enzymes responsible for degradation of cellular components of the host and discuss their roles in pathogenesis.  $2+3=5$

- (b) Give an account of the capsular structure of *Marchantia* and comment on its mode of spore dispersal.  $3+2=5$

(c) What do you mean by disease management? Write briefly various regulatory methods of plant disease management. 1+4=5

(d) Write explanatory notes on the following: 2½+2½=5

(i) Economic importance of *Polytrichum*

(ii) Ecological significance of *Sphagnum*

4. Mention the symptoms, name of the causal organism, disease cycle and control measures of the following diseases (any two): (1+1+2+2)×2=12

(a) Late blight of potato

(b) Loose smut of wheat

(c) Red rot of sugarcane

(d) Citrus canker

5. Describe briefly the progressive evolution of the sporophytes of bryophytes that you have studied. Give diagram. 8+4=12

Or

Describe with sketches the life history of *Anthoceros* and indicate its evolutionary significance. 3+7+2=12

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