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( Held in 2021 )

**BOTANY**

( Major )

Paper : 5.2

**( Plant Pathology and Lichen )**

*Full Marks : 42*

*Time : 2 hours*

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

**GROUP—A .**

( Marks : 21 )

1. Answer the following questions : 1×2=2
  - (a) What is called a penetration peg?
  - (b) What do you mean by necrosis?
  
2. Write short notes on the following : 2×2=4
  - (a) Systemic fungicide
  - (b) Wildfire toxin or tabtoxin

3. Write briefly on any *three* of the following :

5×3=15

- (a) Atrophic symptoms
- (b) Pre-existing defence mechanism of plants
- (c) Quarantine
- (d) Anthropochory
- (e) Disease forecasting

GROUP—B

( Marks : 21 )

4. Answer any *three* of the following (within 800 words) :

7×3=21

- (a) What are 'monogenic' and 'polygenic' resistances, and what are their respective advantages and disadvantages?
- (b) How do you justify that lichens serve as pollution indicator? Describe the sexual reproduction of lichens.
- (c) Mention the various types of rusts of wheat crop in India. Discuss briefly about the recurrence of black stem rust in the plains of India.

- (d) What is the role of environmental factors in the development of the disease 'late blight of potato'? Justify your statement with reference to the etiology of the pathogen.
- (e) How do the epidemic diseases differ from other types of diseases? Explain the important factors for the development of an epidemic with regards to the hosts.

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