

Roll No : .....

Total No. of Questions : 11 ]

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# SP-657

## M.Sc. (Final) Examination, 2021

### BOTANY

#### Paper - VII (a)

#### (Advanced Plant Pathology-I)

Time : 1½ Hours ]

[ Maximum Marks : 75

#### Section-A

(Marks : 2 × 10 = 20)

**Note :-** Answer all *ten* questions (Answer limit 50 words). Each question carries 2 marks.

(खण्ड-अ)

(अंक : 2 × 10 = 20)

**नोट :-** सभी दस प्रश्नों के उत्तर दीजिए (उत्तर-सीमा 50 शब्द)। प्रत्येक प्रश्न 2 अंक का है।

#### Section-B

(Marks : 5 × 5 = 25)

**Note :-** Answer all *five* questions. Each question has internal choice (Answer limit 200 words). Each question carries 5 marks.

(खण्ड-ब)

(अंक : 5 × 5 = 25)

**नोट :-** सभी पाँच प्रश्नों के उत्तर दीजिए। प्रत्येक प्रश्न में विकल्प का चयन कीजिए (उत्तर-सीमा 200 शब्द)। प्रत्येक प्रश्न 5 अंक का है।

#### Section-C

(Marks : 10 × 3 = 30)

**Note :-** Answer any *three* questions out of five (Answer limit 500 words). Each question carries 10 marks.

(खण्ड-स)

(अंक : 10 × 3 = 30)

**नोट :-** पाँच में से किन्हीं तीन प्रश्नों के उत्तर दीजिए (उत्तर-सीमा 500 शब्द)। प्रत्येक प्रश्न 10 अंक का है।

**BI-298**

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**SP-657** P.T.O.

**Section–A**

2 each

1. Attempt all questions. Answer should not exceed **50** words in each question.
  - (i) Name any *four* Plant Pathologists.
  - (ii) What is inoculum potential ?
  - (iii) Write a short note on Irish Famine.
  - (iv) Which fungal disease is related with the discovery of Gibberellins ? Name the pathogen of the disease.
  - (v) What a disease triangle refers to ?
  - (vi) Write down the principles of disease management.
  - (vii) What are systemic fungicides ?
  - (viii) What is Antibiosis ?
  - (ix) Name the pathogen of black rust of wheat. Why is it called heteroecious and macrocyclic ?
  - (x) What are the main differences between loose smut and covered smut ?

**Section–B**

5 each

Answer all questions. Answer should not exceed **200** words in each question.

2. Discuss prepenetration phase of infection.

*Or*

Discuss different types of structural defence strategies developed in response to pathogen attack in plants.

3. What are Phytoalexins ? Describe their role in defence.

*Or*

Write a short note on host specific toxins with examples.

4. Write a short note on calibration of microscope.

*Or*

Describe plant disease resistance.

5. Write short notes on the following :

- (a) Necrosis
- (b) Rots
- (c) Chlorosis

*Or*

Describe annual recurrence of rust of wheat in India.

6. Describe powdery mildew of grapes.

*Or*

Describe Red rot of sugarcane.

**Section–C**

10 each

Answer any *three* questions. Answer should not exceed **500** words in each question.

- 7. Describe role of plant tissue culture in relation to host parasite interaction.
- 8. What is disease forecasting ? Discuss the various devices used for forecasting of epidemics of important diseases.
- 9. Describe chemical control of plant diseases.
- 10. Describe the following :
  - (a) Blast of paddy
  - (b) Flag smut of wheat
- 11. Explain in detail :
  - (a) Fusarium wilt of cotton
  - (b) Late blight of potato