

2017

BOTANY

(Major)

(Plant Pathology and Lichen)

Paper : 5.2

Full Marks : 60

Time : 3 hours

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

1. Answer the following questions : 1×7=7

- (a) Which spore of *Puccinia graminis tritici* is responsible for causing black rust of wheat in the plains of India?
- (b) Who is regarded as the Father of Indian Plant Pathology?
- (c) What is the name of the causal organism of the disease powdery mildew of pea?
- (d) Which insect vector is responsible for transmission of the virus causing yellow mosaic of bhindi?

- (e) What is necrosis?
- (f) What is the causal organism of the disease yellow rust of wheat?
- (g) What is an ectoparasite?

2. Write brief notes on the following : 2×4=8

- (a) Hypertrophy and hyperplasia
- (b) Facultative saprophytes
- (c) Horizontal resistance
- (d) Compound interest disease

3. Write briefly on any *three* of the following : 5×3=15

- (a) Active chemical defence mechanisms in plants
- (b) Integrated Pest Management (IPM)
- (c) Phytoalexins
- (d) Penetration of plant pathogens
- (e) Disease forecasting

4. Give an account of cultural and biological methods of plant disease control. 10

Or

Write notes on the following : 5×2=10

- (a) Citrus canker
- (b) Tobacco mosaic virus

5. Discuss the role of enzymes and toxins in development of plant disease. 10

Or

Give an account of symptoms, causal organisms, disease cycle and control measures of late blight of potato. $2+2+3+3=10$

6. Discuss the symptoms, causal organisms, disease cycle and control of white rust of Crucifers. 10

Or

Give an account of ecological and economic importance of Lichen.
