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Total No. of Pages : 02

Total No. of Questions : 09

B.Sc.(Agriculture) (2014 &amp; Onwards) (Sem.-3)

**PRINCIPLE OF PLANT PATHOLOGY**

Subject Code : BSAG-306

Paper ID : [72556]

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTIONS TO CANDIDATES :**

1. **SECTION-A** is **COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **FIVE** questions carrying **FIVE** marks each and students have to attempt any **FOUR** questions.
3. **SECTION-C** contains **THREE** questions carrying **TEN** marks each and students have to attempt any **TWO** questions.

**SECTION-A****Q1. Differentiate the following with suitable examples :**

- a) Enzymes and Toxins.
- b) Fastidious bacteria and Spiroplasma.
- c) Root rot and wilt.
- d) Canker and Scab.
- e) Rhizopus and Mucor.
- f) Epidemiology and Forecasting.
- g) Protozoa and Algae.
- h) Compound interest and simple interest disease.
- i) Rhizosphere and Phyllosphere.
- j) Resident and Introduced antagonist.

**SECTION-B**

- Q2. What do you mean by the term 'epidemiology'? Explain its role in disease triangle.
- Q3. How plant parasitic nematodes, Bacteria and viruses enter their hosts?
- Q4. Define Phytoalexins and explain their role in defence mechanisms in plants.

Q5. Write short note on :

- a) Biological control of soil borne plant diseases
- b) Life cycle and diagnostic features of *Phytophthora infestans* or *Puccinia striiformis*

Q6. Write a note on sexual and asexual reproduction of plant pathogenic fungi.

### SECTION-C

Q7. a) Explain the significance of perpetuation of pathogens to outbreak of an epiphytotic.  
How pathogens perpetuate in :

- i) Loose smut of wheat
- ii) Blast of rice
- iii) Yellow rust of wheat
- iv) Chili leaf curl
- v) Early blight of tomato
- vi) Root knot nematode

b) How infection occurs in Powdery mildew of peas. Explain the process with the help of suitable sketch/diagram.

Q8. Differentiate between :

- a) Uromyces and Ustilago
- b) Erysiphe and Bremia
- c) Podosphaera and Phyllactinia
- d) Trichoderma and Fusarium
- e) Stemphylium and Alternaria

Q9. a) Discuss different methods of management of diseases due to nematodes.

b) Explain physical and chemical methods of plant disease control with suitable examples.