

Signature of Centre Superintendent

Roll No. : (in figure) _____ (in words) _____

Student Index No. _____ Regn. No. _____ of _____

Time : Two Hours

Full marks : 40

Questions are of value as indicated in the margin

Part - I
(Objective and Short Answer Type)
(Use only ball point pen)

Time : 20 minutes

Full marks : 10

- Note:** 1. Answer in question paper itself.
2. Striking, rewriting or overwriting are not allowed in the objective type questions.

1. **State True (T) or False (F) in respect of the following statements (any five):** 5×0.5=2.5
- (a) The phytoplasma lives and multiplies in the phloem sieve elements of infected plants.
 - (b) Fungal organ developed for absorption of nutrient from the host cells is called appressorium.
 - (c) Secondary metabolite produced by one microbe which inhibits/kills another microbe is known as antibiotic.
 - (d) The restricted movement of planting materials from one location of a country to other locations is regulated under domestic quarantine rules.
 - (e) GM crops are resistant to fungal infection due to higher content of diene.
 - (f) Pathogenesis-related proteins are produced by pathogens during infection.
2. **Fill up the blanks with most appropriate answer (any five):** 5×0.5=2.5
- a) Rapid killing of affected cells in infection court to block the advancement of infection caused by obligate pathogen is termed as _____.
 - b) The excessive enlargement of cell number due to infection is termed as _____.
 - c) Organism which survives indefinitely in the soil in the absence of the host plant is known as _____.
 - d) 'Turkey X disease' appeared due to the consumption of feed infected with _____ produced by the fungus _____.
 - e) Most of the resistance genes are _____ type.
 - f) Flood fallowing is an effective management practice for _____ disease.
3. **Tick (√) the correct alternative (any five):** 5×0.5=2.5
- a) Systemic powdery mildew fungicides belongs to – (i) metalaxyl (ii) tridemorph (iii) antibiotics (iv) none of them
 - b) The first synthetic fungicide is – (i) sulphur (ii) copper (iii) heterocyclic nitrogenous fungicide (iv) none of them
 - c) In Dry seed treatment requirement of fungicides per kg of seeds is – (i) 1g (ii) 2g (iii) 3g (iv) 4g

(2)

- d) Spraying of urea on fallen leaves is an effective measure to manage – (i) apple scab (ii) citrus canker (iii) *moko* wilt of banana (iv) none of them
- e) EPIDEM is a computer based simulation model for – (i) apple scab (ii) early blight of tomato (iii) late blight of potato (iv) stripe rust of wheat
- f) The enzymatic breakdown of cellulose is the result of involvement of – (i) cellulases (C₁, C₂, C_x), (ii) β-glucosidase (iii) both (iv) none of them

4. Match the column 'A' with column 'B' and write your answer in column 'C'

5×0.5=2.5

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|-------------------------|--------------------------------------|-----|
| (a) de Bary (1886) | (1) Hypersensitive response | () |
| (b) S. Prusiner (1982) | (2) Potato rot | () |
| (c) Millerdet (1882) | (3) Bordeaux mixture | () |
| (d) E.C. Stakman (1915) | (4) Father of Indian Plant Pathology | () |
| (e) Butler (1905-1924) | (5) Prions | () |

B.Sc. (Ag.) Honours Semester-III Examination, 2016
Course No: PPC-211 (Plant Pathogens and Principles of Plant Pathology)

Part - II
(Descriptive Type)

Time : 100 Minutes

Full marks : 30

Questions are of value as indicated in the margin

Answer *any four* questions of the following.

5. What is AFTOL? How does the fungal classification system got improvised from time to time? Discuss in brief. 1+6.5=7.5
6. What is pathogenesis? Discuss about the events of pathogenesis adopted by fungal plant pathogens with suitable example. 1+6.5=7.5
7. What are objectives of plant pathology? Discuss the concept of plant disease. Classify plant diseases by biotic factors with examples. 1.5+2+4=7.5
8. Define IDM. Write about the concept, tools and significance of IDM? 1+6.5=7.5
- or
- Explain about survival and dispersal of plant pathogens with examples. 4+3.5=7.5
9. Write short notes on (*any three*) : 3×2.5=7.5
- (a) Remote sensing in disease forecasting.
- (b) Contribution of Indian pathologists. (*any five*)
- (c) Plant defense elicitors
- (d) Fastidious vascular bacteria
- (e) Bio-fumigation and biocontrol agents
10. Differentiate the following (*any three*): 3×2.5=7.5
- (a) Virus vs. Viroid
- (b) Phytoalexins vs. Phytoanticipins
- (c) Monocyclic disease vs. Polycyclic disease
- (d) Pathotoxin vs. Vivotoxin
- (e) Soil solarisation vs. Soil fumigation
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