

MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION

B.Sc. (Agri.)

Semester	: III (New)	Term	: I	Academic Year	: 2013-14
Course No.	: PATH 232	Title	: Principles of Plant Pathology		
Credits	: 2(1+1)				
Day & Date	: Thursday, 24.10.2013	Time	: 9.00 to 11.00	Total Marks	: 40

- Note :**
1. Solve ANY EIGHT questions from SECTION "A".
 2. All questions from SECTION "B" are compulsory.
 3. All questions carry equal marks.
 4. Draw neat diagrams wherever necessary.

SECTION "A"

- Q.1 State sources of survival of plant pathogens and explain the role of collateral hosts.
- Q.2 Write difference between soil inhabitants and root inhabitants.
- Q.3 Define dissemination. Enlist agencies involved in passive dissemination and comment in brief on any one of them.
- Q.4 Describe post infection structural defense in plants.
- Q.5 Write short on: (Any Two)
- 1) Disease triangle
 - 2) Compound interest disease
 - 3) Phytoalexins
- Q.6 State factors affecting infection and comment on host factor.
- Q.7 Write in brief about indirect penetration.
- Q.8 State types of disease resistance and explain vertical disease resistance.
- Q.9 Define plant quarantine and explain domestic quarantine.
- Q.10 Comment on integrated disease management.

SECTION "B"

- Q.11 Define the following terms.
- 1) Disease
 - 2) Pathogen
 - 3) Plant Pathology
 - 4) Symptoms
- Q.12 State true or false.
- 1) Phytopathogenic bacteria produce resting structure for their survival.
 - 2) Wind is the most important source of dispersal of many fungal pathogens.
 - 3) Alternate hosts play important role in autoecious rusts.
 - 4) In simple interest diseases, pathogen completes only one life cycle during the crop season.

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MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATIONS BOARD SEMESTER END EXAMINATION

B.Sc. (Agri.)



Semester : III (New)	Term : I	Academic Year : 2011-12
Course No. : PATH 232	Title : Principles of Plant Pathology	
Credits : 2(1+1)		
Day & Date : Friday, 23.09.2011	Time : 9.00 to 11.00	Total Marks : 40

- Note :
1. Solve ANY EIGHT questions from SECTION "A".
 2. All questions from SECTION "B" are compulsory.
 3. All questions carry equal marks.
 4. Draw neat diagrams wherever necessary.

SECTION "A"

- Q.1 Classify the defense mechanisms in plants and describe in detail the pre-existing defense structures.
- Q.2 Describe in brief the cultural practices for plant disease management with suitable examples.
- Q.3 Enlist different modes of dissemination of plant pathogens and describe in detail discontinuous dissemination.
- Q.4 Write short notes on following (Any Two)
- 1) Plant disease forecasting
 - 2) Plant quarantine
 - 3) Fungicidal seed treatment
- Q.5 Enlist general principles of plant disease management. Explain in short avoidance.
- Q.6 What do you mean by biological control? Explain in detail the mechanisms of action of biological control agents.
- Q.7 Define pathogenesis. Describe in brief the role of enzymes in pathogenesis.
- Q.8 Define IDM. Explain in brief its importance with concept and advantages.
- Q.9 Differentiate between following (Any Two)
- 1) Horizontal and Vertical resistance
 - 2) Exclusion and Eradication
 - 3) Simple interest and Compound interest disease
- Q.10 Explain in brief the role of Biotechnology in plant disease management.

SECTION "B"

- Q.11 Define the followings.
- 1) Inoculum
 - 2) Resistance
 - 3) Perpetuation
 - 4) Fungistat
- Q.12 Answer in one sentence.
- 1) Give one example of fungal bioagent
 - 2) Name the disease managed by hot water treatment.
 - 3) Give one example of non systemic fungicide.
 - 4) Expand the acronym: PGPR.

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Q.9 Match the pairs.

"A"

- 1) Forecasting
- 2) Cross protection
- 3) Growth regulators
- 4) Trichoderma
- 5) Bacteria

"B"

- a) Stomata
- b) Fungus
- c) BLITECAST
- d) Virus
- e) Gibberelins

Q.10 Define the followings.

- 1) Immunity
- 2) Incubation period
- 3) Pathogenicity
- 4) Hypersensitivity
- 5) Inoculum

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MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION
SEMESTER END EXAMINATION



B.Sc. (Agri.)

Semester	: III (New)	Term	: I	Academic Year	: 2010-11
Course No.	: PATH 232	Title	: Principles of Plant Pathology		
Credits	: 2(1+1)				
Day & Date	: Thursday, 21.10.2010	Time	: 9.00 to 11.00	Total Marks	: 40

- Note :
1. Solve ANY FIVE questions from SECTION "A".
 2. All questions from SECTION "B" are compulsory.
 3. All questions carry equal marks.
 4. Draw neat diagrams wherever necessary.

SECTION "A"

- Q.1 Enlist the principles of plant disease management. Explain the role of cultural practices in management of plant diseases.
- Q.2 What is perpetuation? Write the perpetuation of plant pathogens by following means with suitable examples.
i) Facultatism ii) Another host iii) Polymorphism iv) Dormant mycelium
- Q.3 How biotechnology is useful in management of plant diseases?
- Q.4 a) Define pathogenesis. Explain the role of enzymes and toxins in pathogenesis.
b) Narrate different types of defense mechanisms in plants. Describe post infectionl biochemical defense mechanisms.
- Q.5 Describe
1) Methods of application of fungicides
2) Physical and mechanical means of plant disease management.
- Q.6 Write the mechanism of biological control and describe the methods used for management of plant diseases through biological control.
- Q.7 Write short notes on (Any Two)
A) Quarantine B) Integrated Disease Management C) Dissemination

SECTION "B"

- Q.8 Fill in the blanks.
- 1) Brine solution is used for the management of_____.
 - 2) Use of suppressive soil is a_____ method of plant disease management.
 - 3) Initial invasion of plant pathogen into host is known as_____.
 - 4) _____diseases are examples where accumulation of polysaccharides in vascular tissue leads to development of disease.
 - 5) _____ is the fourth important component for development of epidemic apart from host, pathogen and environment.

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Q.9 Correct and rewrite the sentences.

- 1) Crop rotation does not help in reducing soil inoculum.
- 2) Foliar application of fungicides is not useful for controlling air borne foliage infections.
- 3) Obligate parasites live only on dead organic matter.
- 4) Monogenic resistance imparts horizontal resistance.
- 5) The Destructive Insects and Pests Act (DIP) of India was passed in 1924.

Q.10 Do as directed.

- 1) Give one example of biological control agent.
- 2) Name of systemic fungicide.
- 3) State long form of PGPR.
- 4) What do you mean by hypo virulent strain? Answer in one sentence.
- 5) Define antagonism.





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SEMESTER END EXAMINATION

B.Sc. (Agri.)

Semester	: III (New)	Academic Year	: 2009-10
Course No.	: PATH 232	Title	: Principles of Plant Pathology
Credits	: 2 (1+1)		
Day & Date	: Thursday, 12.11.2009	Time	: 9.00 to 11.00
		Total Marks	: 40

- Note:
1. Solve ANY FIVE questions from SECTION "A".
 2. All questions from SECTION "B" are compulsory.
 3. All questions carry equal marks.
 4. Draw neat diagrams wherever necessary.

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SECTION "A"

- Q.1 Enlist different modes of dissemination of plant pathogens. Describe in detail dissemination by air and water.
- Q.2 Define infection. Describe in brief the process of infection and enlist avenues of infection.
- Q.3 Enlist general principles of plant disease management. Explain in short the exclusion and plant quarantine.
- Q.4 Comment on (Any Two)
- 1) Plant disease Epidemiology
 - 2) Hot water treatment to seeds
 - 3) Seed treatment with fungicide
- Q.5 Explain in short how culture methods can eradicate plant pathogens and help in management of plant diseases.
- Q.6 Explain in brief the followings. (Any Two)
- 1) Horizontal and Vertical resistance
 - 2) Transgenic disease resistant plant
 - 3) Structural resistance
- Q.7 What is importance of "Integrated Disease Management (IDM)". Explain the concept with its advantages.

SECTION "B"

- Q.8 Define following terms:
- 1) Perpetuation
 - 2) Tuber indexing
 - 3) Sterilization
 - 4) Fungicide
 - 5) Forecasting

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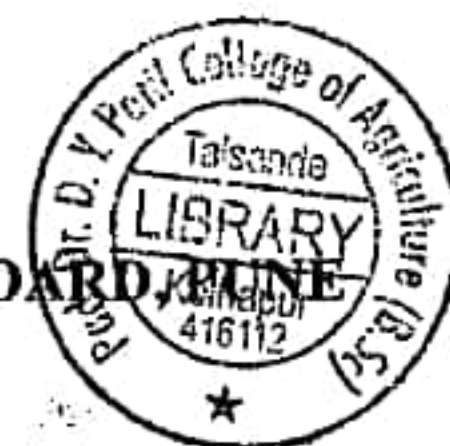
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MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD SEMESTER END EXAMINATION

B.Sc. (Agri.)

Semester	: III (New)	Term	: I	Academic Year	: 2012-13
Course No.	: PATH 232	Title	: Principles of Plant Pathology		
Credits	: 2(1+1)				
Day & Date	: Saturday, 27.10.2012	Time	: 9.00 to 11.00	Total Marks	: 40

- Note :
1. Solve ANY EIGHT questions from SECTION "A".
 2. All questions from SECTION "B" are compulsory.
 3. All questions carry equal marks.
 4. Draw neat diagrams wherever necessary.

SECTION "A"

- Q.1 Define infection. Enlist the avenues of penetration and explain in brief penetration through natural openings.
- Q.2 What do you mean by epidemiology? Write in short about the essential conditions required for epidemics.
- Q.3 Enlist the general principles of plant disease management. Explain in short about eradication.
- Q.4 What is plant quarantine. Write about domestic quarantine with example.
- Q.5 Write in detail role of cultural practices in management of plant diseases.
- Q.6 Define biological control. Describe the methods or techniques used for management of plant diseases through biological control.
- Q.7 Enlist the methods of applications of fungicide. Explain the seed treatment method.
- Q.8 How biotechnology is useful in management of plant diseases.
- Q.9 Write the concept and advantages of integrated plant disease management.
- Q.10 What is dissemination? Describe various agencies involved under continuous dissemination.

SECTION "B"

- Q.11 Fill in the blanks.
- 1) Crown gall formation is due to effect of _____ growth regulator.
 - 2) The process which ensures the infective propagules of the pathogen coming in contact with host is called _____.
 - 3) Entire chain of events leading to disease development is known as _____.
 - 4) Asexual or imperfect stage of fungus is called _____.
- Q.12 Define the following terms.
- 1) Autoecism
 - 2) Hyperparasite
 - 3) Phytoalexin
 - 4) Incubation period

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SEMESTER END EXAMINATION

B.Sc. (Agri.)

Semester : III (New)	Term : I	Academic Year : 2015-16
Course No. : PATH 232	Title : Principles of Plant Pathology	
Credits : 2(1+1)		
Day & Date : Friday, 23.10.2015	Time : 9.00 to 11.00	Total Marks : 40

- Note :**
1. Solve ANY EIGHT questions from SECTION "A".
 2. All questions from SECTION "B" are compulsory.
 3. All questions carry equal marks.
 4. Draw neat diagrams wherever necessary.



SECTION "A"

- Q.1 Explain the general principles of plant disease management.
- Q.2 Enlist various types of inheritable host plant resistances.
- Q.3 Write the avenues of penetration of plant pathogens when they infect the host plant.
- Q.4 Write short notes on (Any two).
- 1) Hot water treatment
 - 2) Solar heat treatment
 - 3) Soil solarization
- Q.5 Explain cultural methods of plant disease management.
- Q.6
- a) What do you understand by plant quarantine?
 - b) Give classification of fungicides based on their mode of action.
- Q.7 Write concept and advantages of integrated disease management.
- Q.8 Enlist and explain the essential conditions required for occurrence of an epidemic.
- Q.9 Explain development of virus free planting material through meristem or shoot tip culture.
- Q.10 Explain the biological methods of plant disease management.

SECTION "B"

- Q.11 Define the following terms.
- 1) Alternate host
 - 2) Virulence
 - 3) Incubation period
 - 4) Facultative parasite
- Q.12 State True or False.
- 1) Pectin substances are the basic material of cell wall.
 - 2) Abscission layer is not a defense mechanism.
 - 3) Penetration peg helps in infection of fungi.
 - 4) Pyricularin toxin is reported in blast disease of rice.

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