

LIBRARY

MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD SEMESTER END EXAMINATION



B.Sc. (Agri.)

Semester : IV (New)	Term : II	Academic Year : 2011-12
Course No. : PATH 243	Title : Diseases of Field Crops and Their Management	
Credits : 3 (2+1)	Time : 14.00 to 17.00	Total Marks : 80
Day & Date : Tuesday, 24.04.2012		

- 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 a) Comment on symptoms and transmission of bud necrosis disease of groundnut.
b) State causal organism and control measures of rust of soybean.
- Q.2 a) Write cause and alternate hosts of rust of bajra and stem rust of wheat.
b) Describe control measures of loose smut of wheat.
- Q.3 a) Write hosts of *Striga* and state why it is difficult to eradicate.
b) Write about causes, symptoms and management of red leaf blight of cotton.
- Q.4 a) Describe symptoms and management of whip smut of sugarcane.
b) Give host range of 1) *Sclerotium rolfsii* 2) Sugarcane mosaic virus
- Q.5 a) Describe symptoms of bacterial blight of rice.
b) Write mode of transmission of rice tungro and yellow mosaic of green gram.
- Q.6 a) Describe symptoms of downy mildew of sunflower.
b) Give two resistant varieties for control of wilt of red gram and wilt of gram.
- Q.7 a) Describe transmissions and management of pigeon pea sterility mosaic.
b) Write primary and secondary sources of inoculum of ergot of pearl millet and downy mildew of maize.
- Q.8 a) Describe predisposing factors and management of downy mildew of pearl millet.
b) Give seed treatment for management of black arm of cotton and blast of rice.
- Q.9 a) Write cause and symptoms of sesamum phyllody.
b) Write a short note on chickpea stunt disease.
- Q.10 a) Describe in short leaf blight disease of castor caused by *Alternaria ricini*.
b) Describe in short wilt of linseed.

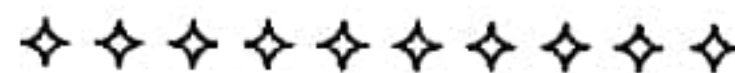
SECTION "B"

- Q.11 State True or False.
- 1) White flies transmit TMV.
 - 2) Long smut of sorghum is internally seed borne disease.

- 3) Sunflower rust is heteroecious in nature.
- 4) *Melampsora ricini* produces aeciospores on castor.
- 5) *Sphacelia sorghi* is imperfect state of *Claviceps sorghi*.
- 6) *Cercospora carthami* is externally seed borne.
- 7) Conidial stage of *Rhizoctonia bataticola* is *Macrophomina phaseolina*.
- 8) Asci without ascocarp are produced in *Taphrina* infecting turmeric.

Q.12 Fill in the blanks.

- 1) Primary source of inoculum of *Alternaria sesami* is _____.
- 2) *Fusarium oxysporum* f. sp. *carthami* is _____ borne in nature.
- 3) The sexual spore of downy mildew fungi is _____.
- 4) The perfect stage of *Ramularia areola* is _____.
- 5) Anthracnose of black gram is caused by _____.
- 6) *Sclerotium cepivorum* causes _____ disease of garlic.
- 7) Linseed rust is _____ in nature.
- 8) Orobanche is _____ parasite of tobacco.



MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION

B.Sc. (Agri.)

Semester : IV (New)	Term : II	Academic Year : 2010-11
Course No. : PATH 243	Title : Diseases of Field Crops and Their	
Credits : 3 (2+1)	Management	
Day & Date : Tuesday, 19.04.2011	Time : 14.00 to 17.00	Total Marks : 80

- 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 a) Enlist the major diseases of soybean caused by fungi; enumerate the symptoms and management strategies for rust of soybean.
b) Describe in detail the smut of sugarcane.
- Q.2 Name the downy mildew pathogens causing diseases in cereals and write the symptoms of green ear disease in pearl millet.
- Q.3 Enlist the different rusts of wheat and narrate in brief about their symptoms.
- Q.4 Write down the diseases of cotton and enumerate the symptoms and control measures for grey mildew.
- Q.5 Name the important viral diseases of field crops and narrate in brief about sterility mosaic disease in pigeon pea.
- Q.6 a) Enlist any three important diseases of rice and describe the symptoms and management strategies for bacterial blight.
b) What are diagnostic symptoms of rhizome rot and the measures to be adopted for management?
- Q.7 Write short notes (Any two):
1) Loose smut of wheat
2) Ergot of pearl millet
3) Grassy shoot of sugarcane
- Q.8 Describe the symptoms and management strategies for Sesamum Phyllody.
- Q.9 Quote any three major diseases of sunflower with their pathogens and describe the symptoms and management strategies for sunflower necrosis disease.
- Q.10 Enlist important ear head disease with casual pathogens and write in detail about the grain mold of sorghum.

SECTION "B"

- Q.11 Select the appropriate words:
1) Downy mildew is effectively controlled by
(Thiram / Metalaxyl MZ / Sulphur)

(P.T.O.)

- 2) Powdery mildew of green gram is due to
(*Erysiphe polygoni* / *Leveillula taurica* / *Uncinula necator*)
- 3) Sterility mosaic disease in pigeon pea is transmitted by vector
(Thrips / Aphids / Mites)
- 4) "Kresk phase" bacterial blight occurs in
(Cotton / Rice / Soybean)
- 5) Anthracnose / pod blight in soybean is caused by
(*Colletotrichum truncatum* / *C.capsici* / *C. falcatum*)
- 6) Whip smut of sugarcane
(*Ustilago scitami* / *U.tritici* / *Uromyces* sp.)
- 7) Alternate host for black stem rust of wheat
(Barberry / Rice / Ragi / Pearl millet)
- 8) Sunflower rust pathogen.
(*Puccinia helianthi* / *P.recondita* / *Uromyces* sp.)

Q.12 Match the pairs:

"A"

"B"

- | | |
|---------------------------|--------------------------------------|
| 1) Long smut of sorghum | a) Tobacco |
| 2) Leaf spot in groundnut | b) <i>Colletotrichum falcatum</i> |
| 3) Red gram wilt | c) <i>Tolyposporium ehrenberghii</i> |
| 4) TMV | d) <i>Cercospora arachidicola</i> |
| 5) Leaf spot of turmeric | e) ICP-8863 |
| 6) Phyllody | f) <i>Taphrina maculans</i> |
| 7) Red rot in sugarcane | g) <i>Aphis craccivora</i> |
| 8) Chickpea stunt | h) Sesamum |

◆ ◆ ◆ ◆ ◆ ◆ ◆ ◆ ◆ ◆

LIBRARY

Padmashree Dr. D. Y. Patil College of Agriculture

A/P: Talsande, Tal : Hatakangle, Dist : Kolhapur

Pin Code : 416 112

MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION



B.Sc. (Agri.)

Semester : IV(New)	Term : II	Academic Year : 2009-10
Course No. : PATH 243	Title : Diseases of Field Crops and Their Management	
Credits : 3(2+1)		
Day & Date : Thursday, 22.4.2010	Time : 14.00 to 17.00	Total Marks : 80

- 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 Describe the symptoms and management of following diseases (Any four):
- 1) Blast of rice
 - 2) Powdery mildew of green and black gram
 - 3) Leaf spot of groundnut
 - 4) Soybean rust
 - 5) Grain smut of sorghum
- Q.2 Comment on symptoms, causal organism and control measures of the following diseases (Any two) :
- 1) Bacterial blight of Rice
 - 2) Ergot of Bajra
 - 3) Whip smut of Sugarcane
- Q.3 Enlist diseases of Cotton and describe the symptoms, causal organism and Management of Angular leaf spot of cotton.
- Q.4 Describe the symptoms, causal organism and management of followings:
- 1) Wilt of Safflower
 - 2) Wilt of Red gram
 - 3) Wilt of Bengal gram
 - 4) Grey mildew of cotton
- Q.5 Write short notes on symptoms and management of the following diseases.
- 1) Downy mildew of Bajra
 - 2) Downy mildew of Sunflower.
- Q.6 Enlist diseases of Wheat and write in detail on black stem rust, its symptoms, causal organism and management of disease.
- Q.7 Give in short the symptoms, causal organism, epidemiology and management of following diseases (Any two):
- 1) Linseed rust
 - 2) Rust of Groundnut
 - 3) Leaf spot of Turmeric

SECTION "B"

- Q.8 Fill in the blanks:
- 1) _____ are the wilt resistant varieties of gram.
 - 2) Ginger rhizome rot can be controlled by soil drenching of _____.
 - 3) Blast of Ragi is caused by _____.
 - 4) Leaf blight of Castor is caused by _____.
 - 5) _____ is the alternate host of bajra rust.
 - 6) Bud necrosis of groundnut is also known as _____.
 - 7) _____ reported first time occurrence of red leaf of cotton in India.

(P.T.O.)

LIBRARY

Padmashree Dr. D. Y. Patil College of Agriculture

A/P: Talsande, Tal : Hatakangle, Dist. : Kolhapur

Pin Code : 416 112

- 8) Leaf spot of safflower is caused by _____.
- 9) Broom rape is a flowering root parasite of _____.
- 10) Grassy shoot of sugarcane is caused by _____.

Q.9 Match the pairs:

"A"	"B"
1) Sunflower necrosis	a) Sterility mosaic of Red gram
2) Tungro disease of rice	b) TSWV
3) BPMR-145 variety	c) Leaf blotch of finger millet
4) <i>Colletotrichum</i>	d) Ascospore
5) J.C.Luthra	e) Leaf Hoppers
6) Phytoplasma	f) Solar heat treatment
7) Sexual spore of ergot fungi	g) Acervuli asexual spore fruit
8) <i>Helminthosporium</i> sp.	h) Powdery mildew of Green gram
9) Bud necrosis of Groundnut	i) RTBV virus
10) Bhavanisagar – 1	j) Tobacco streak virus

0 State true or false:

- 1) Autoecious rust requires only one host to complete their life cycle.
- 2) Surya variety is resistant to sunflower rust disease.
- 3) Root rot of cotton is caused by *Rhizoctonia bataticola*.
- 4) Smut of bajra is caused by *Tolyposporium ehrenbergii*.
- 5) Phyllody of sesamum is transmitted by jassids.
- 6) Rust of sunflower is caused by *Puccinia arachidis*.
- 7) Sterility mosaic is the major disease of Black gram.
- 8) Karnal bunt in wheat is caused by *Neovossia indica*.
- 9) The evident symptoms of charcoal rot of sorghum are lodging and poor grain filling.
- 10) Smut of Maize is caused by *Ustilago tritici*.

◆ ◆ ◆ ◆ ◆ ◆ ◆ ◆ ◆ ◆

LIBRARY

Padmashree Dr. D. Y. Patil College of Agriculture

A/P: Talsande, Tal : Hatakangle, Dist : Kolhapur

Pin Code : 416 112

MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION

B.Sc. (Agri.)

Semester : IV (New)	Term : II	Academic Year : 2012-13
Course No. : PATH 243	Title : Diseases of Field Crops and Their	
Credits : 3 (2+1)	Management	
Day & Date : Tuesday, 16.04.2013	Time : 14.00 to 17.00	Total Marks : 80

- 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 Enlist the different rust of wheat along with causal organism and narrate in brief about their symptoms and alternate host.
- Q.2 a) Enlist diseases of cotton along with causal organism. Write in short about red leaf blight of cotton.
b) Write in detail leaf spot of turmeric.
- Q.3 a) Write symptoms, causal pathogen and transmission of mosaic of tobacco and leaf curl of tobacco.
b) Enlist diseases of safflower and describe in short about wilt of safflower.
- Q.4 Enlist different smut diseases of sorghum with causal organism and write in brief about their symptoms and management.
- Q.5 Write symptom, transmission, causal organism and management of following diseases. (Any Two)
- 1) Bud necrosis of groundnut
 - 2) Grassy shoot of sugarcane
 - 3) Rice tungro disease
- Q.6 a) Write management of following diseases.
- 1) Powdery mildew of green gram
 - 2) Wilt disease of redgram
 - 3) Wilt of gram
 - 4) Red rot of sugarcane
- Q.7 a) Write in detail about anthracnose of soybean.
b) What is mean by autocious rust? Write examples of autocious rust of field crop and write in short about linseed rust.
- Q.8 Write seed treatment for following diseases.
- 1) Loose smut of wheat
 - 2) Black arm of cotton
 - 3) Whip smut of sugarcane
 - 4) Blast disease of paddy
- Q.9 Write symptoms and management of following diseases.
- 1) Downy mildew of sunflower
 - 2) Ergot of Bajra
 - 3) Blight of rice
 - 4) Tikka of groundnut

(P.T.O.)

- Q.10 a) Write in short about *Sesamum* phyllody.
b) Write symptoms and management of blast of ragi and downy mildew of maize.

SECTION "B"

- Q.11 Match the pairs.

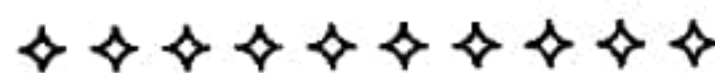
"A"

"B"

- | | |
|----------------------------------|------------------------------------|
| (1) <i>Aphis crassivora</i> | (a) Grey mildew |
| (2) BSMR-736 | (b) <i>Colletotrichum gossypii</i> |
| (3) <i>Ramularia areola</i> | (c) Soybean rust |
| (4) <i>Ustilago maydis</i> | (d) Ergot fungi |
| (5) Tobacco streak virus | (e) Sterility mosaic of pigeonpea |
| (6) <i>Phakospora pachyrhizi</i> | (f) Sunflower necrosis |
| (7) Ascospores in stroma | (g) Chick pea stunt |
| (8) Acervulus with setae | (h) Smut of maize |
| | (i) Downy mildew |

- 12 Fill in the blanks.

- 1) Most destructive phase of bacterial blight of paddy is _____.
- 2) _____ is the alternate host of bajra rust.
- 3) Sexual spore of *Taphrina maculans* are _____.
- 4) *Fusarium oxysporum* perpetuate in soil in the form of _____.
- 5) Perfect stage of *Sphacelia sorghi* is _____.
- 6) Secondary spread of finger millet blast conidia occurs by _____.
- 7) Wheat bunt is caused by _____.
- 8) *Ustilaginoidea virens* causes _____ disease in rice.



LIBRARY

Padmashree Dr. D. Y. Patil College of Agriculture

A/P: Talsande, Tal : Hatakangle, Dist. : Kolhapur

Pin Code : 416 112

MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION

B.Sc. (Agri.)

Semester : IV (New)	Term : II	Academic Year : 2013-14
Course No. : PATH 243	Title : Diseases of Field Crops and Their	
Credits : 3 (2+1)	Management	
Day & Date : Monday, 28.04.2014	Time : 14.00 to 17.00	Total Marks : 80

- 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** Describe the symptoms of following diseases (Any Four)
- 1) Blast of Rice
 - 2) Grey mildew of Cotton
 - 3) Powdery mildew of Green and Black gram
 - 4) Grain smut of Sorghum
 - 5) Leaf spot of Groundnut
- Q.2** Comment on symptoms, causal organism and control measures of the following diseases.
- 1) Ergot of Bajra
 - 2) Whip smut of Sugarcane
- Q.3** Enlist diseases of Cotton and describe the symptoms, causal organism and management of Angular leaf spot of Cotton
- Q.4** Describe the symptoms, causal organism and management of following (Any Two)
- 1) Wilt of Safflower
 - 2) Wilt of Red gram
 - 3) Wilt of Bengal gram
- Q.5** Write short notes on symptoms and management of the following diseases.
- 1) Downy mildew of Bajra
 - 2) Downy mildew of Sunflower
- Q.6** Enlist disease of Wheat and write in detail of black stem rust its symptoms, causal organism and management of disease.
- Q.7** Give in short symptoms, causal organism, epidemiology and management of following diseases.
- 1) Linseed rust
 - 2) Rust of Groundnut
- Q.8** Write in brief about the following.
- 1) Fungicidal seed treatment
 - 2) Brine treatment
 - 3) Solar heat treatment
 - 4) Hot water treatment

(P.T.O.)

LIBRARY

Padmashree Dr. D. Y. Patil College of Agriculture

A/P: Talsande, Tal : Hatakangle, Dist. : Kolhapur

Pin Code : 415 112

Q.9 Enlist diseases of rice and describe the symptoms, casual organism and management of Bacterial blight of rice.

Q.10 Describe the management of following diseases.

- 1) Soybean rust
- 2) Broomrape
- 3) Grassy shoot of Sugarcane
- 4) Rust of sunflower

SECTION "B"

Q.11 Match the pairs.

"A"

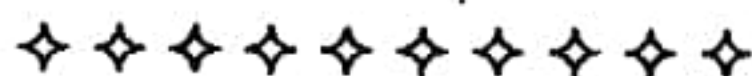
- 1) BPMR-145 variety
- 2) *Colletotrichum*
- 3) J. C. Luthra
- 4) Phytoplasma
- 5) Sexual spore of ergot fungi
- 6) Bud necrosis of Groundnut
- 7) Eriophid mite
- 8) *Helminthosporium sp.*

"B"

- a) Sterility mosaic of Red gram
- b) Tomato spotted wilt virus
- c) Leaf blotch of finger millet
- d) Ascospore
- e) leaf hoppers
- f) Solar heat treatment
- g) Powdery mildew of Green gram
- h) Acervuli asexual spore fruit

Q.12 Fill in the blanks.

- 1) The evident symptoms of charcoal rot of sorghum are _____ and _____.
- 2) The loose smut of wheat is _____ seed borne and systemic disease.
- 3) Red rot of sugarcane is caused by _____.
- 4) *Alternaria* blight of sunflower is caused by _____.
- 5) Leaf spot of turmeric, the asexual reproduction is by means of _____.
- 6) _____ are the resistant varieties of Tur against wilt disease.
- 7) Transformation of floral part into green leafy structure is called as _____.
- 8) Castor rust is caused by _____.



MAHARASHTRA AGRICULTURAL UNIVERSITIES EXAMINATION BOARD, PUNE
SEMESTER END EXAMINATION

B.Sc. (Agri.)

Semester : IV (New)	Term : II	Academic Year : 2014-15
Course No. : PATH 243	Title : Diseases of Field Crops and Their Management	
Credits : 3 (2+1)		
Day & Date : Friday, 08.05.2015	Time : 14.00 to 17.00	Total Marks : 80

- 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 Quote any three major diseases of sunflower with their pathogen and describe the symptoms of sunflower necrosis disease.
- Q.2 Enlist the important viral diseases of field crops and narrate in brief about sterility mosaic disease in pigeon pea.
- Q.3 Enlist the different rusts of wheat and narrate in brief about their symptoms.
- Q.4 a) Enlist the major diseases of soybean caused by fungi, enumerate the symptoms and management strategies for rust of soybean.
b) Describe in detail the smut of sugarcane.
- Q.5 Describe the symptoms and management strategies for Sesamum Phyllody.
- Q.6 Write short notes on (Any two).
1) Anthracnose of soybean
2) Grassy shoot of sugarcane
3) Ergot of pearl millet
4) Loose smut of wheat
- Q.7 a) Enlist any three important diseases of rice and describe the symptoms and management strategies for bacterial blight.
b) What are diagnostic symptoms of rhizome rot and the measures to be adopted for management?
- Q.8 Enlist the diseases of cotton and enumerate the symptoms and control measures for grey mildew.
- Q.9 Enlist the downy mildew pathogens causing diseases in cereals and write the symptoms of green ear disease in pearl millet.
- Q.10 Enlist important ear head diseases with a causal pathogens and write in detail about the grain mold of sorghum.

(P.T.O.)

LIBRARY

Padmashree Dr. D. Y. Patil College of Agriculture

A/P: Talsande, Tal : Hatakangle, Dist : Kolhapur

Pin Code : 416 112

SECTION "B"

Q.11 Match the following pairs.

"A"

- 1) Leaf blotch of turmeric
- 2) Bud necrosis
- 3) Red gram wilt
- 4) Cleistothecium
- 5) Leaf spot in groundnut
- 6) BSMR-736
- 7) Ascospores in stroma
- 8) Chickpea stunt

"B"

- a) *Erysiphe polygoni*
- b) ICP-8863
- c) Ergot fungi
- d) Tomato spotted wilt virus
- e) *Tapharina maculans*
- f) *Aphis craccivora*
- g) *Cercospora arachidicola*
- h) Sterility mosaic of pigeonpea

Q.12 Fill in the blanks.

- 1) Whip smut of sugarcane is caused by_____.
- 2) Leaf curl of tobacco is caused by_____.
- 3) Phyllody in sesamum is transmitted by_____.
- 4) "Kresek phase" bacterial blight occurs in_____ crop.
- 5) Alternate host of black stem rust of wheat is_____.
- 6) Rust of linseed is caused by_____.
- 7) *Fusarium oxysporum* perpetuate in soil in the form of_____.
- 8) Wheat bunt is caused by_____.

◆ ◆ ◆ ◆ ◆ ◆ ◆ ◆ ◆ ◆