

Supervisor's signature: _____

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AGRICULTURAL UNIVERSITIES OF GUJARAT

1. Anand Agricultural University, Anand 2. Navsari Agricultural University, Navsari
3. Junagadh Agricultural University, Junagadh 4. S. D. Agricultural University, S. K. Nagar

Sixth Semester (Reg.) B.Sc. (Hons.) Agri. End Examination- June/July- 2016

PART -A (Objective)

Course No.: Pl. Path. 6.5 Course title: Diseases of Horticultural Crops and their Management (2+1)

Date: 21.06.2016

Time: 9.30 to 10.15 hrs.

Day: Tuesday

Marks: 40.00

- Note: 1. All the questions carry equal marks.
2. Over marking should be avoided.

Marks obtained

Q.1 Tick mark (✓) most appropriate option from the following.

- The abnormal increase in cell size of plant organ is known as _____.
A. Hypoplasia B. Atrophy
C. Hyperplasia D. Hypertrophy
- 1000 ppm = _____ g/lit water.
A. 0.1 g B. 0.01 g
C. 1 g D. 10 g
- Partial phanerogamic plant parasite of mango is _____.
A. Loranthus B. Striga
C. Cuscuta D. Orobanche
- Damping off disease is favoured by _____ soil moisture.
A. Low B. Medium
C. Dry D. High
- Chrysanthemum stunt is caused by _____.
A. Nematode B. Bacteria
C. Viriod D. Virus
- Spraying of urea on fallen leaves is effective for management of _____ disease.
A. Apple scab B. Fire blight of apple
C. Powdery mildew of apple D. None of above
- Slightly raised oily brown spots on pomegranate leaf and fruit cracking are produced by _____.
A. *Cercospora punicae* B. *Xanthomonas punicae*
C. *Alternaria alternata* D. *Colletotrichum gloesporioides*
- The source of primary infection of cumin wilt disease is _____.
A. Chlymadospore B. Oospore
C. Microconidia D. Macroconidia
- Each ascus normally contains _____ number of ascospores.
A. Two B. Four
C. Eight D. Six
- Which pathogen of grape destroyed wine industry of France due to epidemic in 1882?
A. *Phytophthora infestans* B. *Plasmopara viticola*
C. *Helminthosporium oryzae* D. *Uncinula necator*

11. The fungus causing die back of rose persists in dead twigs and withers branches in _____ stage.
- A. Pycnidial
B. Cleostoethecial
C. Perithecial
D. Pseudothecial
12. The mycelium of *Leveillula taurica* is _____.
- A. Paraphytic
B. Endophytic
C. Ectophytic
D. Ectoendophytic
13. Coffee rust was introduced from _____ country in India.
- A. USA
B. Brazil
C. France
D. Sri Lanka
14. Which one of the following pair of crop and disease is correctly matched?
- A. Tomato - White rust
B. Coconut- Stem bleeding
C. Potato- Rust
D. Cucumber - Club root
15. The term '*Phytophthora*' means _____.
- A. Root rot
B. Plant destroyer
C. Phyton like
D. Potato rot
16. _____ is autoecious rust.
- A. Guava rust
B. Coffee rust
C. Tea rust
D. Both A & B
17. The causal organism of Alternaria blight of marigold is _____.
- A. *Alternaria taurica*
B. *Alternaria tagetica*
C. *Alternaria macrospora*
D. *Alternaria porri*
18. The resistant variety against yellow vein mosaic of bhendi is _____.
- A. Pusa Jwala
B. Arka Jyoti
C. Parbhani Kranti
D. All of these
19. Air borne conidia of *Oidium mangiferae* cause _____.
- A. Primary infection
B. Secondary Infection
C. Both A & B
D. None of these
20. Which of the following variety of banana is susceptible against Panama wilt?
- A. Poovan
B. Basrai
C. Gros Michel
D. Moongil
21. The perfect stage of grape anthracnose pathogen is _____.
- A. *Elsinoe ampelina*
B. *Gloeosporium ampelophagum*
C. *Oidium tuckeri*
D. *Mycosphaerella ampelina*
22. Due to _____ disease of cumin, cuminol content of its seed is reduced drastically.
- A. Dry rot
B. Wilt
C. Powdery mildew
D. Blight
23. Red scaled onion varieties are resistant to smudge disease due to presence of _____.
- A. Fusaric acid
B. Citric acid
C. Protocatacheuic acid
D. Oxalic acid
24. Fire blight of apple caused by *Erwinia amylovora* was first reported in 1878 by _____.
- A. Robert Koch
B. T. J. Burill
C. Julius Kuhn
D. E.F. Smith

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25. Stem gall of coriander is caused by _____.
- A. *Aspergillus niger* B. *Protomyces macrosporus*
C. *Cercosporidium personatum* D. *Rhizoctonia solani*
26. *Paecilomyces lilacinus*, a bio-agent is used for the management of _____.
- A. Fungi B. Bacteria
C. Nematodes D. Algae
27. Phomopsis blight of brinjal is _____ disease.
- A. Soil borne B. Internally seed borne
C. Externally seed borne D. All of these
28. _____ is recommended for the management of mango malformation.
- A. IAA B. GA
C. NAA D. IBA
29. Conidia of *Colletotrichum capsici* are produced in _____.
- A. Acervulus B. Perithecia
C. Pycnidia D. Cleistothecia
30. Honey combing and stem pitting are the typical symptoms of _____ disease of citrus.
- A. Citrus Greening B. Citrus Gummosis
C. Citrus Canker D. Citrus Tristeza
31. Brown ring observed in the potato tuber is due to _____ disease.
- A. Common scab B. Late blight
C. Black scurf D. Bacterial wilt
32. Tuber treatment with 3% boric acid solution for 30 min is effective to manage _____.
- A. Late blight of potato B. Common scab of potato
C. Early blight of potato D. None of them
33. Downy mildew fungi can be managed by applying _____.
- A. Sulphur B. Imazalil
C. Oxathins D. Metalaxyl MZ
34. Little leaf of brinjal can be managed by spraying _____.
- A. Aureofungin B. Streptocycline
C. Tetracycline D. Streptomycin
35. Intercellular mycelium means _____.
- A. Presence of mycelium between the cell B. Presence of mycelium on epidermis cell
C. Presence of mycelium within the cell D. None of these
36. Which stage of *Meloidogyne incognita* cause infection to solanaceous host _____.
- A. Ist Juvenile (J₁) B. IInd Juvenile (J₂)
C. IIIrd Juvenile (J₃) D. IVth Juvenile (J₄)
37. For which potato disease, forecasting model "BLITECAST" is used?
- A. Late Blight B. Bacterial Wilt
C. Early Blight D. Wart
38. Resistant variety for cumin wilt is _____.
- A. GC-1 B. GC-4
C. GC-2 D. GC-5

39. Which of the following fungicide should not be used for the management of powdery mildew of cucurbits at high temperature.
- A. Sulphur dust
B. Wettable sulphur
C. Tridemorph
D. Dinocap
40. The easiest, cheapest, eco-friendly and effective method of plant disease management are _____.
- A. Foliar spray and seed treatment
B. Seed and soil treatment
C. Cultural practices and soil drenching
D. Use of resistant varieties and seed treatment
41. Bunchy top of banana virus is transmitted in _____ manner.
- A. Persistent
B. Semi persistent
C. Non persistent
D. All of these
42. "Shepherd's crook" symptoms appeared in _____ disease of apple.
- A. Scab
B. Powdery Mildew
C. Fire Blight
D. Black Rot
43. Drying of twigs from tip to downward in rose is caused due to _____.
- A. *Phytophthora palmivora*
B. *Sphaerotheca pannosa*
C. *Leveillula taurica*
D. *Diplodia rosarum*
44. _____ disease of potato is favoured by high soil temperature, low soil moisture and high soil pH (alkaline).
- A. Early blight
B. Late blight
C. Common scab
D. Brown rot
45. *Rhizoctonia solani* causing foot rot of papaya produces _____.
- A. Sclerotia
B. Zoospore
C. Oospore
D. Chlamydospores
46. The primary source of infection of cucurbit downy mildew is _____.
- A. Zoospore
B. Oospore
C. Basidiospore
D. Ascospore
47. The seedlings killed before the emergence from the soil is called _____.
- A. Pre emergence damping off
B. Post emergence damping off
C. Both A & B
D. None of these
48. Early blight of potato is occurred in the field _____.
- A. After tuberization
B. At any crop stage
C. Before tuberization
D. None of these
49. Irish famine was occurred due to late blight of potato in the year _____.
- A. 1943
B. 1845
C. 1882
D. 1891
50. Secondary infection of citrus gummosis occurs through _____.
- A. Oospore
B. Conidia
C. Zoospore
D. Sclerotia
51. Fruit spot of pomegranate is caused by _____.
- A. *Cercospora punicae*
B. *Cercospora musicola*
C. *Cercospora tageticola*
D. *Cercospora arachidicola*
52. Citrus tristeza is transmitted by _____.
- A. Aphid
B. Dodder
C. Leaf hopper
D. Both A & B

53. Powdery mildew disease is generally favoured by _____.
A. Cool and dry weather
B. Hot and dry weather
C. Warm and humid weather
D. None of the above
54. Bud rot of coconut is caused by _____.
A. *Phytophthora nicotiana*
B. *Phytophthora palmivora*
C. *Phytophthora citrophthora*
D. *Phytophthora infestans*
55. For soil solarization _____ μm thick LLDPE (Low Linear Density Polyethylene) is used.
A. 1 μm
B. 20-25 μm
C. 100 μm
D. 200-250 μm
56. Propiconazole is traded as _____.
A. Score
B. Tilt
C. Bavistin
D. Kavach
57. Which of the following mango disease causes heavy loss at post harvest stage?
A. Anthracnose
B. Powdery mildew
C. Malformation
D. Die back
58. Stem canker of guava is caused by _____.
A. *Colletotricum psidii*
B. *Puccinia psidii*
C. *Fusarium oxysporum*
D. *Physalospora psidii*
59. Tomato leaf curl virus belongs to _____ group.
A. Potyvirus
B. Geminivirus
C. Babuvirus
D. Potexvirus
60. 'Target board effect' symptoms in tomato is appear due to _____.
A. *Alternaria*
B. *Colletotrichum*
C. *Phytophthora*
D. *Helminthosporium*
61. *Botrytis allii* causing garlic neck rot disease survives as _____.
A. Chlymadospore
B. Zoospore
C. Conidia
D. Sclerotia
62. Moko wilt of banana is characterized by _____.
A. Exudation of ooze
B. Early ripening of fruits
C. Both A & B
D. None of these
63. The causal organism of black rot of coffee is _____.
A. *Pellicularia koleroga*
B. *Cephaleuros mycoidea*
C. *Phytophthora palmivora*
D. *Hemileia vastatrix*
64. Powdery mildew of cucurbits is caused by _____.
A. *Erysiphe cichoracearum*
B. *Sphaerotheca fuliginea*
C. *Podosphera leucotricha*
D. Both A & B
65. Cucumber mosaic virus is infecting _____.
A. Banana
B. Clover
C. Cucumber
D. All of these
66. Which of the following disease is seed borne?
A. Bacterial blight of clusterbean
B. Downy mildew of cucurbits
C. Powdery mildew of cumin
D. Papaya ring spot virus

67. _____ disease of guava forms cracks and lesions on bark.
 A. Wilt B. Root rot
 C. Red rust D. Stem canker
68. _____ pest helps in transmission of purple blotch of onion.
 A. Aphid B. Jassid
 C. Thrips D. White fly
69. Rhinoceros beetle enhances the incidence of _____ disease of coconut.
 A. Bud rot B. Root rot
 C. Wilt D. None of these
70. For management of nematode, carbofuran 3G is to be applied in the soil at _____ per ha.
 A. 13 kg B. 33 kg
 C. 23 kg D. 43 kg
71. Blight of fennel is caused by _____.
 A. *Rhizoctonia solani* B. *Cercospora punicae*
 C. *Colletotrichum capsici* D. *Alternaria tenuis*
72. Which of the following is a resistant variety of ber against *Alternaria* leaf spot disease?
 A. Gola gurgaon B. ZG-3
 C. Popular gola D. All of these
73. *Erysiphe polygoni* causing powdery mildew in _____ crop.
 A. Garlic B. Coriander
 C. Cluster bean D. Grapes
74. Usually brown and sunken spots with grey central area on bean pods are due to _____ disease.
 A. Downy mildew B. Powdery mildew
 C. Yellow mosaic virus D. Anthracnose
75. Papaya leaf curl virus is transmitted by _____.
 A. Leaf hopper B. White fly
 C. Aphids D. Jassids
76. The pathogen of apple scab disease overwinters in leaves by forming _____.
 A. Pseudothecia B. Cleistothecia
 C. Perithecia D. Apothecia
77. The term necrosis means _____.
 A. Blighting B. Death of cell
 C. Atrophy D. Curling
78. Total destruction of citrus orchards was done in Florida state of USA for eradication of _____.
 A. Citrus gummosis B. Citrus tristeza
 C. Citrus canker D. Citrus greening
79. Root feeding with fungicides is typical way to manage diseases in _____ crop.
 A. Coconut B. Potato
 C. Cumin D. Tomato
80. Which of the following rust is caused by algae?
 A. Garlic rust B. Cucurbit rust
 C. Guava rust D. Tea rust

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Sixth Semester (Reg.) B.Sc. (Hons.) Agri. End Examination- June/July- 2016

PART –B (Subjective)

Course No.:- Pl. Path. 6.5 **Course title:** Diseases of Horticultural Crops and their Management (2+1)

Date: 21.06.2016

Time: 10:15 to 12:00 hrs

Day: Tuesday

Marks: 40.00

Note: 1. Figures to the right side indicate marks.

2. Support your answers with suitable diagrams wherever necessary.

- Q.1 Mention causal organism and describe characteristic symptoms of the following diseases (Any Five). 10.0**
1. Mango malformation
 2. Brown rot of potato
 3. Citrus gummosis
 4. Root knot of brinjal
 5. Purple blotch of onion
 6. Fire blight of apple
 7. Papaya ring spot
- Q.2 Write causal organism, favourable conditions and disease cycle of the following diseases (Any Five). 10.0**
1. Sigatoka leaf spot of banana
 2. *Phomopsis* blight of brinjal
 3. Foot rot of papaya
 4. Powdery mildew of mango
 5. Blight of cumin
 6. Bacterial blight of pomegranate
 7. Bunchy top of banana
- Q.3 Write suitable management practices of the following diseases (Any Five). 10.0**
1. Die back of rose
 2. Little leaf of brinjal
 3. Wilt of guava
 4. Damping off of tomato
 5. Yellow vein mosaic of okra
 6. Common scab of potato
 7. Citrus canker
- Q.4 Differentiate the following diseases (Any Five). 10.0**
- | | | |
|-----------------------------|------------|-----------------------------------|
| 1. Panama wilt | and | Moko wilt of banana |
| 2. Downy mildew | and | Powdery mildew of grapevine |
| 3. Early blight | and | Late blight of tomato |
| 4. Dodder | and | Giant mistletoe |
| 5. Bud rot | and | Stem bleeding of coconut |
| 6. <i>Alternaria</i> blight | and | <i>Ramularia</i> blight of fennel |
| 7. Wilt | and | Stem gall of coriander |

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Sixth Semester (Supple.) B.Sc. (Hons.) Agri. End Examination- Dec., 2015 /Jan., 2016

PART - A (Objective)

Course No.:Pl. Path. 6.5 Title of Course: Diseases of Horticultural Crops and Their Management (2+1)

Date : 31.12.2015

Day : Thursday

Time :14:30 to 15: 15 hrs

Marks : 40

Marks obtained:	
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*** Tick mark (✓) most appropriate option from the following.**

- (1) **The abnormal increase in the size of plant organ is known as:**

(a) Hypoplasia	(b) Hypertrophy
(c) Hyperplasia	(d) Atrophy
- (2) **Yellow vein mosaic of okra is transmitted through:**

(a) Aphid	(b) Thrips
(c) Mites	(d) White fly
- (3) **Which of the following fungicide was discovered accidentally by Millardet?**

(a) Vitavax	(b) Captan
(c) Cerasan	(d) Bordeaux mixture
- (4) **_____ type of soil is most favoured for root knot nematode.**

(a) Sandy soil	(b) Clay soil
(c) Heavy black	(d) Calcareous soil
- (5) **Damping off disease is favoured by.**

(a) Low soil moisture	(b) Medium soil moisture
(c) Dry soil	(d) High soil moisture
- (6) **Late blight of potato is associated with:**

(a) Bengal famine	(b) France famine
(c) Irish famine	(d) None of them
- (7) **The common name of Rogor is:**

(a) Endosulfan	(b) Chlorpyrifos
(c) Quinalphos	(d) Dimethoate

P.T.O.

- (8) Which of the following insect helps in transmission of citrus canker disease?
 (a) Red mite (b) Leaf hopper
 (c) Leaf minor (d) Thrips
- (9) 200ppm = _____ gm / L. water.
 (a) 0.2 gm (b) 2 gm
 (c) 0.02 gm (d) 20 gm
- (10) Coffee rust was first reported from :
 (a) Java (b) Fiji
 (c) Ceylon (d) Sumatra
- (11) *Paecilomyces lilacinus* , a bio-agent is used for the control of :
 (a) Fungi (b) Bacteria
 (c) Algae (d) Nematodes
- (12) Secondary spread of citrus tristeza disease takes place through vector:
 (a) *Myzus persicae* (b) *Aphis gossypii*
 (c) *Toxoptera aurantii* (d) *Pentalonia nigronervosa*
- (13) Bird's eye spot disease is caused due to
 (a) *Penicillium italicum* (b) *Colletotrichum capsici*
 (c) *Aspergillus niger* (d) *Alternaria solani*
- (14) Fire blight of apple was first reported by....
 (a) T.J.Burrill (b) Anton de Beary
 (c) E.J.Butler (d) G.N.Agrios
- (15) Rust of coffee is caused due to....
 (a) *Helminthosporium maydis* (b) *Helminthosporium carborum*
 (c) *Hemileia vastatrix* (d) *Helminthosporium turcicum*
- (16) *Protomyces macrosporus* can perpetuate as:
 (a) Oospore (b) Chlamydospore
 (c) Sclerotia (d) Acervuli
- (17) Each ascus normally contains _____ number of ascospores.
 (a) Four (b) Six
 (c) Eight (d) Two
- (18) Emisan is a :
 (a) Copper fungicide (b) Organomercurial
 (c) Sulphur fungicide (d) Antibiotics
- (19) The term necrosis indicate:
 (a) Death of cell (b) Curling
 (c) Blighting (d) Atrophy
- (20) Fungicides which are absorbed in to the system of the plant and move to the remote site of infection are known as:
 (a) Systematic (b) Fungistatic
 (c) Systemic (d) Non-systemic
- (21) _____ pathogen caused heavy losses to grape wine industry in France due to its epidemics in 1875:
 (a) *Phytophthora infestans* (b) *Helminthosporium oryzae*
 (c) *Plasmopara viticola* (d) *Uncinula necator*

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- (22) Which hormone is used in management of mango malformation?
 (a) GA3 (b) IBA
 (c) NAA (d) 2-4-D
- (23) Which of the following fungicide is known as wonder drug?
 (a) Vitavax (b) Captan
 (c) Cerasan (d) B.M.
- (24) _____ disease of potato is favoured by high soil temperature, low soil moisture and high soil PH (alkaline).
 (a) Early blight (b) Brown rot
 (c) Late blight (d) None of above
- (25) Garlic mosaic disease is transmitted by _____ vector.
 (a) *Bemisia tabaci* (b) *Aphis medicaginus*
 (c) *Myzus persicae* (d) *Aphis cracivora*
- (26) Which of the following type of plastic film is used for soil solarization in nursery beds for management of damping off of disease?
 (a) 100 gauge LLDPE (b) 200 gauge LLDPE
 (c) 150 gauge LLDPE (d) 25 gauge LLDPE
- (27) *Ramularia* blight of fennel is caused by.....
 (a) *Ramularia foeniculi* (b) *Ramularia aerola*
 (c) *Ramularia* spp. (d) *Ramularia ramulera*
- (28) Downy mildew disease can be effectively managed by spraying of:
 (a) Metalaxyl MZ (b) Thiophanate methyl
 (c) Hexaconazole (d) Carbendazim
- (29) Mango malformation is common in:
 (a) North-East India (b) North-West India
 (c) South-East India (d) South-West India
- (30) Karathane is a :
 (a) Fungicide (b) Insecticide
 (c) Nematicide (d) Bactericide
- (31) *Fusarium* wilt of banana is also known as:
 (a) Panama disease (b) Moko disease
 (c) Bunchy top (d) Sigatoka disease
- (32) The term '*Phytophthora*' means:
 (a) Plant destroyer (b) Root rot
 (c) Phytonlike (d) Potato rot
- (33) The first recognized virus disease of plants in world is :
 (a) Tobacco mosaic (b) Cucumber mosaic
 (c) Yellow vein mosaic (d) Bean common mosaic
- (34) Disintegration of parenchymatus tissues at the base of papaya stem resulting honeycomb appearance is due to :
 (a) *Pythium aphanidermatum* (b) *Colletotrichum gloeosporoides*
 (c) *Ascochyta caricae* (d) *Fusarium oxysporum*
- (35) Panama wilt of banana is _____ type of disease.
 (a) Simple interest (b) Compound interest
 (c) Polyatic (d) Polygenic

P.T.O.

- (36) **The mycelium of *Erysiphe polygoni* is:**
 (a) Ectophytic (b) Endophytic
 (c) Paraphytic (d) Ectoendophytic
- (37) **Mottle leaf of citrus is caused due to deficiency of :**
 (a) Zinc (b) Iron
 (c) Boron (d) Calcium
- (38) **The disease caused by algae is known as:**
 (a) Brown rust (b) Yellow rust
 (c) Red rust (d) Stem rust
- (39) **The common name of Tilt is:**
 (a) Difenconazole (b) Propiconazole
 (c) Hexaconazole (d) Penconazole
- (40) **Root rot disease is favoured by soil moisture:**
 (a) Low soil moisture (b) High soil moisture
 (c) Optimum soil moisture (d) Water stagnation in field
- (41) **Most of the banana diseases spread in new area through:**
 (a) Soil (b) Air
 (c) Suckers (d) Fruits
- (42) **State the name of disease caused due to *Alternaria porri* in onion:**
 (a) Rust (b) Onion smudge
 (c) Damping off (d) Purple blotch
- (43) **The causal organism of powdery mildew of grapes is:**
 (a) *Podosphaera leucotricha* (b) *Leveillula taurica*
 (c) *Plasmopara viticola* (d) *Uncinula necator*
- (44) **The primary source of inoculums for *Fusarium* wilt disease is:**
 (a) Cleistothecia (b) Chlamyospore
 (c) Perithecia (d) Sclerotia
- (45) **State the name of causal organism causing Sigatoka disease in banana**
 (a) *Alternaria alternata* (b) *Cercospora musae*
 (c) *Macrophomina phaseolina* (d) *Colletotrichum* sp.
- (46) **Banana mosaic is transmitted through**
 (a) Red bug (b) Jassids
 (c) Aphids (d) Mites
- (47) **State the name of sexual spores produced by *Phytophthora*:**
 (a) Chlamyospore (b) Oospore
 (c) Zygosporangium (d) Zoospore
- (48) **Blitox-50 contains:**
 (a) Sulphur (b) Organo mercurials
 (c) Copper (d) Manganese
- (49) **Onion rust is.....**
 (a) Autocious (b) Heterocious
 (c) Herbacious (d) Monoecious
- (50) **_____ variety of cumin has tolerance against wilt.**
 (a) GC-2 (b) GC-1
 (c) GC-3 (d) GC-4
- (51) **Secondary spread of citrus gummosis takes place through:**
 (a) Oospore (b) Chlamyospore
 (c) Zoospore (d) Sclerotia

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- (52) **The mycelium of *Leveillula taurica* is:**
 (a) Ectophytic (b) Endophytic
 (c) Paraphytic (d) Ectoendophytic
- (53) **Powdery mildew of ber is caused by:**
 (a) *Erysiphe polygoni* (b) *Oidium mangiferai*
 (c) *Leveillula taurica* (d) *Oidium erysiphoides*
- (54) **State the name of guava disease which forms cracks and lesions on stem:**
 (a) Red rust (b) Wilt
 (c) Stem canker (d) Root rot
- (55) **Which of the following causal organism is responsible for stem bleeding disease in coconut?**
 (a) *Botrydiplodia theobromae* (b) *Ceratocystis paradoxa*
 (c) *Rhizoctonia solani* (d) *Phytophthora katsurae*
- (56) **Usually brown and sunken spots with grey central area on bean pods is due to :**
 (a) Powdery mildew (b) Downy mildew
 (c) Anthracnose (d) Yellow mosaic virus
- (57) **Drying of twigs from tip to down wards in rose is caused due to :**
 (a) *Phytophthora palmivora* (b) *Sphaerotheca pannosa*
 (c) *Leveillula taurica* (d) *Diplodia rosarum*
- (58) **Olive green to grey velvety spots on apple young leaves, flower buds and sepals are due to:**
 (a) Powdery mildew (b) Fire blight
 (c) Apple scab (d) Bacterial blight
- (59) **Stem gall of coriander is caused by:**
 (a) *Colletotrichum circinans* (b) *Cercospora punicae*
 (c) *Protomyces macrosporus* (d) *Erysiphe polygoni*
- (60) **White fungal growth appears on upper surface of the leaf is a characteristic of _____ disease.**
 (a) Powdery mildew (b) White rust
 (c) Downy mildew (d) Blister blight
- (61) **Which of the following bio-control agent is effective for the management of guava wilt?**
 (a) *Metarrhizium anisoplae* (b) *Trichothecium* spp.
 (c) *Trichoderma viride* (d) *Beauveria bassiana*
- (62) **Common scab of potato is caused by...**
 (a) *Streptomyces griseus* (b) *Streptomyces flaveolus*
 (c) *Streptomyces aureofaciens* (d) *Streptomyces scabies*
- (63) **Powdery mildew of cumin is favoured by...**
 (a) Cool and dry weather (b) Hot and dry weather
 (c) Hot weather (d) None of the above
- (64) **Die-back of rose is caused due to...**
 (a) *Diplodia rosarum* (b) *Botryodiplodia theobromae*
 (c) *Diplodia natalensis* (d) *Diplodia ricinicola*
- (65) **Blister blight of tea was first reported from _____ state of India.**
 (a) Assam (b) Tamil Nadu
 (c) Karnataka (d) Sikkim

P.T.O.

- (66) **Chrysanthemum stunt is caused by...**
 (a) MLO's (b) Virus
 (c) Viroid (d) Phytoplasma
- (67) **Fire blight of apple pathogen is transmitted by...**
 (a) Insects (b) Nematodes
 (c) Fungi (d) Weeds
- (68) ***Cuscuta reflexa* absorbs food and water through haustoria from citrus is a...**
 (a) Partial root parasite (b) Complete stem parasite
 (c) Complete root parasite (d) Partial stem parasite
- (69) **In which of the following month soil solarization is to be carried out for the management of damping off of vegetables?**
 (a) April-May (b) September-October
 (c) January-February (d) July-August
- (70) **Leaf curl of chilli is caused due to...**
 (a) Nicotiana virus-10 (b) Nicotiana virus-1
 (c) Tomato spotted wilt virus (d) Chilli leaf curl virus
- (71) **Partial phanerogamic stem parasite of mango is...**
 (a) *Orobanche* sp. (b) *Cuscuta* sp.
 (c) *Striga* sp. (d) *Dendrophthoe* sp.
- (72) **State the name of fruiting bodies produced by chilli die-back / fruit rot pathogen..**
 (a) Pycnidia (b) Sclerotia
 (c) Acervuli (d) Cleistothecia
- (73) **Fruit becomes mummified and abundant pycnidia are produced on fruit surface is a characteristic symptoms of...**
 (a) Fruit rot of chilli (b) Apple scab
 (c) Fruit rot of brinjal (d) Potato scab
- (74) ***Trichoderma viride* is a biofungi used to control:**
 (a) Bacterial disease (b) Viral disease
 (c) Fungal disease (d) Insect control
- (75) **_____ antibiotic is recommended for the control of citrus canker.**
 (a) Agrimycin (b) Tetracyclin
 (c) Streptocycline (d) Aureofungin
- (76) **Bacterial blight of cluster bean was first reported by _____ from Anand.**
 (a) A. J. Patel (b) M. K. Patel
 (c) M. V. Desai (d) M. D. Patel
- (77) ***Cercospora* leaf spot of marigold is caused by...**
 (a) *Cercospora tagetica* (b) *Metarrhizium anisoplae*
 (c) *Cercospora arachidicola* (d) *Verticillium lecanii*
- (78) **Germinating seeds killed before the emergence from the soil surface is a characteristics symptoms of...**
 (a) Root rot (b) Damping off
 (c) Wilt (d) Collar rot
- (79) **Crop rotation is useful for control of disease caused by:**
 (a) Soil invaders (b) Soil inhabitants
 (c) Seed borne virus (d) Internally seed borne
- (80) **Cumin blight was first reported by:**
 (a) B. N. Uppal (b) M.V. Desai
 (c) M. K. Patel (d) M. J.Thirumulachar

XXXXXXXXXXXXXXXXXXXXXXXXXXXX

AGRICULTURAL UNIVERSITIES OF GUJARAT

- | | |
|---|---|
| 1. Anand Agricultural University, Anand | 3. Navsari Agricultural University, Navsari |
| 2. Junagadh Agricultural University, Junagadh | 4. S. D. Agricultural University, Sardarkrushinagar |

Sixth Semester (Supple.) B.Sc. (Hons.) Agri. End Examination Dec., 2015 /Jan., 2016

PART - B (Subjective)

Course No.:Pl. Path. 6.5 Title of Course: Diseases of Horticultural Crops and Their Management (2+1)

Date : 31.12.2015

Time :15:15 to 17: 00 hrs

Day : Thursday

Marks : 40

Note : 1. Support your answer with suitable examples and diagram wherever necessary.
2. Figures to the right indicate marks.

Q. 1. State the name of causal organism and describe the characteristic symptoms of the following diseases (ANY FIVE). (10.0)

- | | |
|---------------------------|---------------------------------|
| 1. Cumin blight | 5. Yellow vein disease of okra |
| 2. Citrus canker | 6. Sigatoka leaf spot of banana |
| 3. Purple blotch of onion | 7. Early blight of potato |
| 4. Little leaf of brinjal | |

Q. 2. Write suitable management practices for the following diseases (ANY FIVE). (10.0)

- | | |
|--------------------------|------------------------------|
| 1. Powdery mildew of ber | 5. Damping off of vegetables |
| 2. Gummosis of citrus | 6. Late blight of potato |
| 3. Smudge of onion | 7. Leaf curl of tomato |
| 4. Wilt of cumin | |

Q. 3. State the name of causal organism, favourable conditions and disease cycle of the following diseases (ANY FIVE). (10.0)

- | | |
|------------------------------------|-----------------------------|
| 1. Foot rot of papaya | 5. Coffee rust |
| 2. Downy mildew of cucurbits | 6. Ripe fruit rot of chilli |
| 3. Brown rot of potato | 7. Powdery mildew of cumin |
| 4. Bacterial blight of pomegranate | |

Q. 4. Differentiate between the following diseases (ANY FIVE). (10.0)

- | | |
|----------------------------|---|
| 1. Moko | and Panama wilt of banana |
| 2. Vegetative malformation | and Floral malformation of mango |
| 3. Papaya mosaic | and Papaya leaf curl |
| 4. Bud rot | and Stem bleeding of coconut |
| 5. Alternaria blight | and Ramularia blight of fennel |
| 6. Dodder | and Loranthus |
| 7. Early blight | and Late blight of tomato |

Uni. Seat No. _____

Centre: _____

Regi. No. _____

Sign. of Supervisor: _____

AGRICULTURAL UNIVERSITIES OF GUJARAT

1. Anand Agricultural University, Anand. 3. Navsari Agricultural University, Navsari
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Sixth Semester End Examination of B.Sc.(Hons.) Agri. Regular June/July-2015

PART – A (Objective)

Course No. Pl. Path. 6.5 Title of Course: Diseases of Horticultural Crops and Their Management (2+1)

Date: 01/07/2015

Time: 9.30 to 12.00 hrs

Day: Wednesday

Marks: 40.00

Marks obtained

Q.1 Tick mark (✓) most appropriate option from the following.

- Virus diseases can be controlled by spraying:
(a) Systemic fungicides (b) Nematicides
(c) Bactericides (d) Systemic insecticides
- Protomyces macrosporus* can perpetuates as:
(a) Acervuli (b) Oospore
(c) Chlamydo-spore (d) Sclerotia
- Alternaria* blight of cumin was first reported by:
(a) M.K. Patel (b) A.N. Mukhopadhyay
(c) B. N. Uppal (d) T.J. Thirumalachar
- The climatic condition is not favouring late blight of potato is:
(a) Low temperature (b) High humidity
(c) Cloudy weather (d) Dry and hot weather
- Little leaf of brinjal is transmitted by:
(a) *Emrasca bigutula* (b) *Hishimonas phycitis*
(c) *Myzus persicae* (d) *Bemisia tabaci*
- Phomopsis vexans* survives in plant debris as:
(a) Acervulus (b) Cleistothecium
(c) Pycnidium (d) Sporodochium
- Powdery mildew of clusterbean is caused by:
(a) *Erysiphae polygona* (b) *Sphaerotheca pannosa*
(c) *Phyllactinia corylea* (d) *Leveillula taurica*
- Fungicide that should not be used for controlling powdery mildew of cucurbits is:
(a) Dinocap (b) Sulphur dust
(c) Tridemorph (d) Penconazole
- Red scaled onion varieties are resistant to:
(a) Purple blotch (b) Downy mildew
(c) Smudge (d) Smut

P.T.O.

10. Common scab of potato is caused by:
(a) *Streptomyces aureofasciens* (b) *Streptomyces griseus*
(c) *Streptomyces scabies* (d) *Streptomyces flaveolus*
11. Pathogen associated with root-knot nematode causing wilt complex is:
(a) *Alternaria* spp. (b) *Cercospora* spp.
(c) *Fusarium* spp. (d) *Curvularia* spp.
12. Acervulus is produced by:
(a) *Sclerotinia* spp. (b) *Fusarium* spp.
(c) *Pythium* spp. (d) *Colletotrichum* spp.
13. Downy mildew of onion is caused by:
(a) *Peronospora destructor* (b) *Plasmopara viticola*
(c) *Pseudoperonospora cubensis* (d) *Podosphaera fuliginea*
14. Air borne conidia is produced by:
(a) *Alternaria solani* (b) *Erysiphe polygoni*
(c) *Cercospora capsici* (d) *Meloidogyne incognita*
15. *Cucumber mosaic virus* is transmitted through:
(a) Jassids (b) Leaf hopper
(c) Whitefly (d) Aphids
16. Neck rot of onion and garlic is caused by:
(a) *Botrytis allii* (b) *Sclerotium cepivorum*
(c) *Fusarium oxysporum* f.sp. *cepae* (d) *Burkholderia cepacia*
17. The mycelium ofpowdery mildew pathogen is endophytic.
(a) *Erysiphe polygoni* (b) *Uncinula necator*
(c) *Leveillula taurica* (d) *Sphaerotheca pannosa*
18. Yellow vein mosaic of okra is caused by:
(a) *Geminivirus* (b) *Potyvirus*
(c) *Potexvirus* (d) *Comovirus*
19. *Potato leaf roll virus* is transmitted by:
(a) *Bemisia tabaci* (b) *Myzus persicae*
(c) *Aphis gossypii* (d) *Pentalonia nigronervosa*
20. Appearance of dark, sunken ulcer like lesion with pink center on fruit is the characteristic feature of infection caused by:
(a) *Fusarium solani* (b) *Sclerotinia sclerotiorum*
(c) *Colletotrichum capsici* (d) *Alternaria solani*
21. Discovery of Bordeaux mixture is associated with:
(a) Downy mildew of ber (b) Downy mildew of cucurbits
(c) Downy mildew of grapes (d) Downy mildew of onion
22. Coffee rust pathogen survives and spreads through:
(a) Pycnial stage (b) Aecial stage
(c) Uredial stage (d) Telial stage
23. Blister blight of tea is caused by:
(a) *Cephaleuros mycoidea* (b) *Exobasidium vexans*
(c) *Diaporthe vexans* (d) *Alternaria solani*

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24. Biocontrol agent commonly used for the management of wilt and root rot diseases is:
- (a) *Metarrhizium* spp. (b) *Trichothecium* spp.
(c) *Trichoderma* spp. (d) *Trichogramma* spp.
25. *Fusarium* wilt pathogen survives in soil as:
- (a) Cleistothecia (b) Perithecia
(c) Chlamydospore (d) Sclerotia
26. Flood fallowing is an effective management practice of :
- (a) Panama wilt of banana (b) Moko wilt of banana
(c) Foot rot of papaya (d) Bud rot of coconut
27. Bordeaux paste generally having copper sulphate in it:
- (a) 0.1% (b) 1%
(c) 5% (d) 10%
28. Vein flecking in young leaves and stem pitting on the tree bark is the characteristic symptom of :
- (a) Citrus tristeza (b) Citrus gummosis
(c) Citrus canker (d) Citrus greening
29. Cross protection can be applied to manage:
- (a) Yellow vein mosaic of okra (b) Papaya ringspot
(c) Leaf curl of chilli (d) Cucurbit mosaic
30. Spraying of urea on fallen leaves is an effective measure to manage:
- (a) Citrus canker (b) Apple scab
(c) Powdery mildew of ber (d) Sigatoka leaf spot of banana
31. Reddish brown oozing from the cracks of coconut tree trunk is the characteristic symptoms of:
- (a) Bud Rot (b) Stem bleeding
(c) Root wilt (d) Stem end rot
32. *Cuscuta reflexa* absorbs food and water through haustoria from citrus is a:
- (a) Complete stem parasite (b) Partial stem parasite
(c) Complete root parasite (d) Partial root parasite
33. *Citrus tristeza virus* can be transmitted through:
- (a) *Toxoptera citricida* (b) *Myzus persicae*
(c) *Pentalonia nigronervosa* (d) *Aphis gossypii*
34. *Oidium mangiferae* survives during off-season as:
- (a) Cleistothecia in malformed panicles (b) Chlamydospore
(c) Oospore (d) Sclerotia
35. Powdery mildew of ber is caused by:
- (a) *Oidium mangiferae* (b) *Oidium piperis*
(c) *Oidium erysiphoides* (d) *Oidium caricae*
36. Disintegration of parenchymatous tissues at the base of papaya stem resulting honeycomb appearance is due to:
- (a) *Pythium aphanidermatum* (b) *Colletotrichum gloeosporoides*
(c) *Ascochyta caricae* (d) *Fusarium oxysporum*
37. Bud rot of coconut is caused by:
- (a) *Phytophthora parasitica* (b) *Phytophthora palmivora*
(c) *Phytophthora citrophthora* (d) *Pythium aphanidermatum*

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38. First report of bacterial plant disease in the world is :
(a) Brown rot of potato (b) Moko wilt of banana
(c) Fire Blight of apple (d) Bacterial blight of pomegranate
39. Leaf spot of sapota is caused by:
(a) *Phaeophleospora indica* (b) *Helminthosporium indica*
(c) *Phaeocercospora indica* (d) *Alternaria indica*
40. Fungicide metalaxyl is recommended for the management of _____.
(a) Early blight of tomato (b) Fruit rot of chilli
(c) Late blight of potato (d) Fruit rot of brinjal
41. The causal organism of downy mildew of cucurbits is _____.
(a) *Pseudomonas fluorescens* (b) *Uncinula necator*
(c) *Phytophthora citrophthora* (d) *Pseudoperonospora cubensis*
42. Bacterial blight of clusterbean was first reported by _____ from Anand.
(a) M.V. Desai (b) A.N. Mukhopadhyay
(c) M.K. Patel (d) T.J. Thirumalachar
43. Which of the following disease is transmitted by white fly?
(a) Potato leaf roll (b) Cucurbits mosaic
(c) Little leaf of brinjal (d) Chilli leaf curl
44. *Colletotrichum circinans* is causing _____ disease in onion.
(a) Purple blotch (b) Downy mildew
(c) Neck & bulb rot (d) Smudge
45. Germinating seeds killed before the emergence from the soil surface is a characteristic symptom of _____ disease.
(a) Root rot (b) Collar rot
(c) Wilt (d) Damping off
46. Potato scab is caused by _____.
(a) Fungi (b) Actinomycetes
(c) Bacteria (d) Phytoplasma
47. The primary source of inoculum of *Phythium* sp. is _____.
(a) Zygosporangium (b) Chlamydospore
(c) Oospore (d) Sclerotia
48. The causal organism of fennel blight is:
(a) *Alternaria tenuis* (b) *Alternaria alternata*
(c) *Alternaria solani* (d) *Alternaria macrospora*
49. *Diplodia rosarum* causes _____ disease in rose.
(a) Rust (b) Powdery mildew
(c) Wilt (d) Die back
50. Which potato disease has taken historical citation due to famine in Ireland during 1845.
(a) Early blight (b) Common scab
(c) Late blight (d) Black scurf
51. Coffee rust is caused by:
(a) *Puccinia helianthi* (b) *Exobasidium vexans*
(c) *Hemileia vastatrix* (d) *Cephaleuros parasiticus*
52. Fruit become mummified and abundant pycnidia are produced on fruit surface is a characteristic symptoms of:
(a) Fruit rot of chilli (b) Common scab
(c) Phomopsis fruit rot of brinjal (d) Brown rot
53. The pathogen associated with mango malformation is:
(a) *Rhizoctonia bataticola* (b) *Colletotrichum circinans*
(c) *Alternaria alternata* (d) *Fusarium moniliformae*

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54. The primary source of inoculums of *Phytophthora* spp. is:
 (a) Zygosporangium (b) Oospore
 (c) Chlamydospore (d) Sclerotia
55. The causal organism of powdery mildew of grapes is:
 (a) *Podosphaera leucotricha* (b) *Plasmopara viticola*
 (c) *Leveillula taurica* (d) *Uncinula necator*
56. Perfect stage of sigatoka leaf spot of banana is:
 (a) *Mycosphaerella musicola* (b) *Glomerella cingulata*
 (c) *Colletotrichum gloeosporioides* (d) *Gibberella fujikuroi*
57. Which pathogen on pomegranate produces spots as dark brown, irregular water soaked, slightly raised and oily appearance on fruits?
 (a) *Cercospora punicae* (b) *Oidium erysiphoides*
 (c) *Xanthomonas punicae* (d) *Colletotrichum gloeosporioides*
58. Which rust is caused by algae?
 (a) Coffee rust (b) Garlic rust
 (c) Guava rust (d) Tea rust
59. Metalaxyl is traded as:
 (a) Topsin M (b) Ridomil
 (c) Bavistin (d) Dithane M-45
60. Flowering parasite of mango is:
 (a) *Orobancha* sp. (b) *Cuscuta* sp.
 (c) *Striga* sp. (d) *Dendrophthoe* sp.
61. ----- is a nematode bio-agent.
 (a) *Pseudomonas fluorescens* (b) *Paecilomyces lilacinus*
 (c) *Bacillus subtilis* (d) *Exobasidium vexans*
62. Papaya leaf curl is transmitted through:
 (a) White fly (b) Mites
 (c) Thrips (d) Jassids
63. Stem canker of guava is caused by:
 (a) *Phytophthora psidi* (b) *Ramularia areola*
 (c) *Pseudoperonospora cubensis* (d) *Puccinia penisseti*
64. Which apple disease produces olive green to grey coloured velvety spots on sepals and young leaves, later turning to metallic black?
 (a) Fire blight (b) Scab
 (c) Powdery mildew (d) Rust
65. Mottle leaf of citrus is due to deficiency of:
 (a) Ca (b) Zn
 (c) Mn (d) Fe
66. Which of the following disease is favoured by dry and cool weather?
 (a) White rust (b) Grey mildew
 (c) Powdery mildew (d) Downy mildew
67. Which chemical is recommended for the management of mango malformation?
 (a) IAA (b) GA
 (c) NAA (d) IBA
68. Bud rot of coconut is caused by:
 (a) *Phytophthora nicotiana* (b) *Phytophthora palmivora*
 (c) *Phytophthora citrophthora* (d) *Phytophthora infestans*
69. Moko disease of banana is caused by:
 (a) *Cercospora musae* (b) *Mycosphaerella musicola*
 (c) *Ralstonia solanacearum* (d) *Alternaria cubensis*
70. Bunchy top of banana is transmitted through:
 (a) *Aphis gossypii* (b) *Pentalonia nigronervosa*
 (c) *Myzus persicae* (d) *Aphis medicaginis*

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71. Stem gall of coriander is caused by:
(a) *Colletotrichum circinans* (b) *Cercospora punicae*
(c) *Protomyces macrosporus* (d) *Erysiphe polygoni*
72. Downy mildew disease can be effectively managed by spraying:
(a) Metalaxyl MZ (b) Chlorothalonil
(c) Mancozeb (d) Thiophanate methyl
73. Damping off disease is favoured bysoil moisture.
(a) Low (b) Optimum
(c) High (d) Medium
74. *Alternaria porri* is causing disease in onion:
(a) Rust (b) Damping off
(c) Onion smudge (d) Purple blotch
75. White spots appear on upper surface of the leaf and turn ashy gray in later stage is a characteristic symptoms of:
(a) Powdery mildew (b) White rust
(c) Downy mildew (d) Blister blight
76. Root-knot disease of brinjal is caused by:
(a) *Paratilenchus macrophallus* (b) *Meloidogyne incognita*
(c) *Heterodera avenae* (d) *Anguina tritici*
77. For nematode management carbofuran 3G is to be applied in the soil at ... rate per ha.
(a) 13 kg (b) 33 kg
(c) 23 kg (d) 43 kg
78. Chrysanthemum stunt is caused by:
(a) Virus (b) Viroid
(c) Spiroplasma (d) Bacteria
79. A knob like structure of fungi which absorbs the nutrients from the host is known as:
(a) Appresoria (b) Rhizomorph
(c) Haustoria (d) Sclerotia
80. Leaf spot of marigold is caused by:
(a) *Cercospora timorensis* (b) *Cercospora trichosanthes*
(c) *Cercospora viticola* (d) *Cercospora tagetica*

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AGRICULTURAL UNIVERSITIES OF GUJARAT

1. Anand Agricultural University, Anand.
2. Junagadh Agricultural University, Junagadh.
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4. S.D. Agricultural University, S.K. Nagar

Sixth Semester End Examination of B.Sc.(Hons.) Agri. Regular June/July -2015

PART –B (Subjective)

Course No. Pl. Path. 6.5 Title of Course: Diseases of Horticultural Crops and Their Management (2+1)
Date: 01/07/2015 Time: 9.30 to 12.00 hrs
Day: Wednesday Marks: 40.00

- Note:** 1. Figures to the right side indicate marks.
2. Support your answers with suitable examples/diagram wherever necessary.

- Q. 1** Mention causal organism and describe characteristic symptoms of the following diseases (Any Five). 10.0
1. Stem bleeding of coconut
 2. Bacterial blight of clusterbean
 3. Yellow vein mosaic of okra
 4. Powdery mildew of grapes
 5. Little leaf of brinjal
 6. Mango malformation
 7. Bunchy top of banana.
- Q. 2** Write causal organism, favourable weather conditions and disease cycle of the following diseases (Any Five). 10.0
1. Citrus canker
 2. Wilt of cumin
 3. Foot rot of papaya
 4. Powdery mildew of ber
 5. Red rust of tea
 6. Anthracnose of mango
 7. Apple scab.
- Q. 3** Write suitable management practices of the following diseases (Any Five). 10.0
1. Powdery mildew of fennel
 2. Cumin blight
 3. Die back of rose
 4. Leaf curl of tomato
 5. Root-knot of brinjal
 6. Mango anthracnose
 7. *Alternaria* leaf blight of marigold.
- Q. 4** Differentiate the following diseases (Any Five). 10.0
1. Early blight and Late blight of potato
 2. Papaya mosaic and Papaya leaf curl
 3. Powdery mildew and Downy mildew of cucurbits
 4. Citrus canker and Citrus gummosis
 5. Onion purple blotch and Onion smudge
 6. *Alternaria* leaf spot and *Cercospora* leaf spot of chilli
 7. Pre-emergence and Post-emergence damping off of vegetables.

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AGRICULTURAL UNIVERSITIES OF GUJARAT
ANAND/ NAVSARI/ JUNAGADH/ SARDARKRUSHINAGAR
Sixth Semester (Reg.) B.Sc.(Hons.) Agri. End Examination-2014

Course No. Pl. Path. 6.5 : Diseases of Horticultural Crops and Their Management (2+1)

Date: 02.07.2014

Day : Wednesday

Time: 9.30 to 12.00 hrs

Marks: 80.00

PART -II (Subjective)

Marks: 40.00

Note: 1. Figures to the right side indicate marks.

2. Support your answers with suitable examples/diagram wherever necessary.

Q.1 Mention causal organism and describe characteristic symptoms of the following plant diseases (Any five). 10.0

- ✓ 1. Mango malformation
- ✓ 2. Ripe fruit rot /anthracnose of chilli
- ✓ 3. Little leaf of brinjal
4. Bud rot of coconut
5. Fire blight of apple
- ✓ 6. Leaf curl of tomato
- ✓ 7. Damping off of vegetables.

Q.2 Write causal organism, favourable conditions and disease cycle of the following diseases (Any five). 10.0

1. Foot/stem rot of papaya
2. Bacterial blight of clusterbean
3. Blight of cumin
- ✓ 4. Citrus gummosis
- ✓ 5. Powdery mildew of mango
6. Purple blotch of onion
7. Wilt of coriander.

Q.3 Write the causal organism and suggest suitable control measures of the following diseases (Any five). 10.0

1. Late blight of tomato
- ✓ 2. Citrus canker
- ✓ 3. Yellow vein mosaic of okra
4. Powdery mildew of clusterbean
- ✓ 5. Cumin wilt
- ✓ 6. Root- knot of vegetables
- ✓ 7. Apple scab.

Q.4 Differentiate the following diseases (Any five). 10.0

- ✓ 1. Papaya leaf curl and Papaya ring spot
- ✓ 2. Panama and Moko disease of banana
- ✓ 3. Downy mildew and Powdery mildew of grapevine
4. Red rust of tea and Rust of coffee
- ✓ 5. *Cascuta* sp. and *Dendrophthoae* sp.
6. *Alternaria* blight and *Ramularia* blight of fennel
7. Fruit rot of chilli and Fruit rot of brinjal.

0-0-0-0-0

Sixth Semester (New) (Reg.) B.Sc. (Hons.) Agri. End Examination-2012
Pl. Path. 6.5: Diseases of Horticultural Crops and Their Management (2+1)

Date: 06.06.2012

Time :10.00 to 10.45 hrs.

Day :Wednesday

Marks:40.00

Registration No. _____

Uni. Seat No. _____

Note: 1. All the questions carry equal marks. 2. Rewriting/overwriting should be avoided.
3. Choose the correct option (A,B,C or D) from the following and answer in the bracket.

Part-I (Objective)

Answer

1. White powdery mass of fungus appears on leaves and fruits and in latter stage, produces fruiting structure Cleistothecia is a characteristic symptoms of ... ()
A Downey mildew B Grey mildew
C Powdery mildew D White rust
2. Which fungicide is recommended for the control of powdery mildew of ber? ()
A Wettable sulphur 80 WP B Copper oxychloride 50 WP
C Captafol 75 WP D Zineb 75 WP
3. Which antibiotic is recommended for the control of citrus canker? ()
A Agrimycin B Tetracycline
C Streptocycline D Aureofungin
4. The causal organism of gummosis of citrus is:..... ()
A *Phytophthora infestans* B *Phytophthora colocasiae*
C *Phytophthora citrophthora* D *Phytophthora capsici*
5. *Cuscuta reflexa* absorbs food and water through haustoria from citrus is a..... ()
A Partial root parasite B Compete stem parasite
C Compete root parasite D Partial stem parasite
6. The mycelium of *Erysiphe polygoni* is.... ()
A Ectophytic B Paraphytic
C Endophytic D None of above
7. State the name of chemical which is recommended for the management of mango malformation? ()
A IAA B GA
C NAA D IBA

P.T.O

Moko disease

:2:

Moko disease of banana is caused by

- A Bacteria
B Virus
C Fungi
D Nematode

The causal organism of powdery mildew of cumin is.....

- A *Erysiphe polygoni*
B *Erysiphe graminis*
C *Erysiphe cichoracearum*
D *Oidium mangiferae*

State the name of disease which is favoured by dry and cool weather?

- A White rust
B Powdery mildew
C Grey mildew
D Downey mildew

Vascular bundles of infected roots become brown in colour is a characteristic symptoms of disease.

- A Root-knot
B Root rot
C Fungal wilt
D Damping off

State the name of resistant variety of cumin against wilt disease?

- A Gujarat cumin-1
B Gujarat cumin-2
C Gujarat cumin-4
D Gujarat cumin-5

The causal organism of fennel blight is.....

- A *Alternaria tenuis*
B *Alternaria alternata*
C *Alternaria solani*
D *Alternaria macrospora*

Little leaf of brinjal is transmitted by.....

- A Aphids
B Thrips
C Jassids
D White fly

Germinating seeds killed before the emergence from the soil surface is a characteristic symptoms of disease.

- A Root rot
B Damping off
C Will
D Collar rot

Fungicide metalaxyl is recommended for the management of ...

- A Early blight of tomato
B Fruit rot of chilli
C Late blight of potato
D Fruit rot of brinjai

State the name of fungus which produces acervuli as a fruiting body?

- A *Alternaria porri*
B *Peronospora destructor*
C *Colletotricum capsici*
D *Fusarium solani*

Light green patches on upper surface of leaves and dirty white growth produce on a corresponding lower surface is feature of..... disease.

- A Grey mildew
B Downey mildew
C Powdery mildew
D White blister

Round, brownish, sunken spots resembling 'bird's eyes' is a characteristic symptoms of disease.

- A Anthracnose of chilli
B Blister blight of tea
C Anthracnose of grapevine
D *Alternaria* blight of fennel

- :3:
- 20 The causal organism of downy mildew of ~~curbit~~ ~~is~~..... ()
 A *Pseudomonas glaucescens* B *Pseudoperonospora cubensis*
 C *Phytophthora citrophthora* D *Uncinula necator*
- 21 The causal organism of bacterial blight of pomegranate is.... ()
 A *Xanthomonas punicae* B *Xanthomonas campestris*
 C *Xanthomonas malvacearum* D *Xanthomonas citri*
- 22 The primary source of foot rot of papaya disease is ... ()
 A Ascospore B Chlamydo-spore
 C Basidiospore ~~D Oospore~~
- 23 *Puccinia psidii* causes red rust disease in..... ()
 A Banana B Coconut
 C Apple ~~D Guava~~
- 24 Olive green to grey lesions with a velvety surface is a characteristic symptoms produce in ... ()
 A Apple scab B Bud rot of coconut
 C Wilt of guava D Potato scab
- 25 Mottle leaf of citrus is due to deficiency of.... ()
 A Ca ~~B Zn~~
 C Mn D Fe
- 26 Bud rot of coconut is caused by..... ()
 A *Phytophthora nicotiana* B *Phytophthora infestance*
 C *Phytophthora citrophthora* ~~D *Phytophthora palmivora*~~
- 27 The rust of coffee is caused by..... ()
 A ~~*Hemilleia vastatrix*~~ B *Melampsora lini*
 C *Puccinia porri* D *Cephaleuros mycoidea*
- 28 Bacterial blight of clusterbean was first reported by..... from Anand. ()
 A A. N. Mukhopadhyay ~~B M. K. Patel~~
 C M.V. Desai D T. J. Thirumallachar
- 29 Which of the following disease is transmitted by white fly ? ()
 A Citrus tristeza B Potato leaf roll
 C Bunchy top of banana ~~D Leaf curl of papaya~~
- 30 Which chemical is recommended for the management of root- knot nematodes? ()
 A Carbendazim ~~B Carbofuran~~
 C Carbamate D Copper oxychloride
- 31 Partial stem parasite of mango is..... ()
 A *Striga* sp. B *Cuscuta* sp.
 C ~~*Dendrophthoae* sp.~~ D *Orobanche* sp.

Which of the following fungus found associated with root-knot disease ? ()

- A *Alternaria* spp.
- B *Cercospora* spp.
- C *Fusarium* spp.
- D *Colletotrichum* spp.

Potato scab is caused by..... ()

- A Fungi
- B Actinomycetes
- C Bacteria
- D Virus

Colletotrichum circinans is causingdisease in onion. ()

- A Smudge
- B Downy mildew
- C Purple blotch
- D Neck & bulb rot

Stunt disease of chrysanthemum is caused by.... ()

- A Phytoplasma
- B Virus
- C Viroids
- D Prions

State the biological control agent for the management of coriander wilt..... ()

- A *Trichoderma viride*
- B *Metarrhizium anisopliae*
- C *Beauveria bassiana*
- D *Verticilium lacani*

Cercospora leaf spot of mari gold is caused by.... ()

- A *Cercospora tagetica*
- B *Cercospora beticola*
- C *Cercospora arachidicola*
- D *Cercospora apii*

8 Bean anthracnose produces symptoms on..... ()

- A Stem only
- B Leaf only
- C Pod only
- D All above

9 Discovery of Bordeaux mixture is associated with which disease of grapevine? ()

- A Powdery mildew
- B Anthracnose
- C Downy mildew
- D Bird's eye spot

40 Stunting, yellowing, internodes shortening and severe root-gall formation are observed in ()

- A Root nodule
- B Root rot
- C Root-knot
- D Stem rot

AGRICULTURAL UNIVERSITIES OF GUJARAT
VANDANA/SARDAR NAGADH/SARDARKRUSHINAGAR

Sixth Semester (New) (Reg.) B. Sc. (Hons.) Agri. End Examination-2011

Pl. Path. 6.5 : Diseases of Horticultural Crops and Their Management (2+1)

Date: 08.06.2011

Time: 14.00 to 16.30 hrs

Day: Wednesday

Marks: 40.00

Registration No.....

University Seat.No.....

Part-I (Objective paper)

- Note: 1. Choose the correct option (A, B, C or D) from following and answer in bracket.
2. Rewriting/overwriting should be avoided.
3. All questions carry equal marks.

1. Mottle leaf of citrus is due to deficiency of... (A)
 (A) Zinc (B) Iron
(C) Boron (D) Calcium
2. State the name of the pathogen of grapes which caused epidemic in France during 1875. (B)
 (A) *Phytophthora infestans* (B) *Plasmopara viticola*
(C) *Uncinula necator* (D) None
3. Downy mildew disease can be effectively managed by spraying ... (A)
 (A) Metalaxyl MZ (B) Thiophanate methyl
(C) Mancozeb (D) Carbendazim
4. Yellow vein mosaic of okra is transmitted through... (C)
(A) *Aphis gossypii* (E) *Thrips tabaci*
 (C) *Bemisia tabaci* (D) All
5. Potato leaf roll virus is transmitted by... (A, B, C, D)
(A) *Aceria cajani* (B) *Pentalonia nigronervosa*
(C) *Aphis gossypii* (D) *Bemisia tabaci*
6. Partial stem parasite of mango is... (D)
(A) *Cuscuta* (B) *Striga*
(C) *Orobanche* (D) *Loranthus*
7. Which type of soil is favourable for root-knot nematode? (A)
 (A) Sandy soil (B) Clay soil
(C) Heavy black soil (D) Calcareous soil

Complete stem parasite of citrus is...

- (A) ~~Cuscuta~~ (B) Striga
(C) Orobanche (D) Loranthus

Root-knot disease of okra is effectively managed by...

- (A) Carbendazim (B) Carbofuran
(C) Thiram (D) Mancozeb

Which vector is transmitting little leaf of brinjal?

- (A) *Myzus persicae* (B) *Scutothrips dorsalis*
(C) ~~*Hishimonas phycitis*~~ (D) *Aceria cajani*

Damping off disease is favored by ... soil moisture

- (A) Low (B) Medium
(C) Optimum (D) High

The mycelium of *Erysiphe polygoni* is...

- (A) ~~Ectophytic~~ (B) Semi endophytic
(C) Endophytic (D) None

3. Common scab of potato is caused by...

- (A) *Streptomyces griseus* (B) ~~*Streptomyces scabies*~~
(C) *Streptomyces aureofaciens* (D) *Streptomyces flaveolus*

4. Mango malformation is caused by...

- (A) *Alternaria solani* (B) *Meloidogyne incognita*
(C) *Fusarium solani* (D) ~~*Fusarium moniliformae*~~

15. Citrus gummosis is caused by...

- (A) *Fusarium* spp. (B) ~~*Phytophthora*~~ spp.
(C) *Pythium* spp. (D) *Colletotrichum* spp.

16. The causal organism of powdery mildew of grapes is...

- (A) *Podosphaera leucotricha* (B) *Plasmopara viticola*
(C) *Leveillula taurica* (D) ~~*Uncinula necator*~~

17. The primary source of *Fusarium* wilt is...

- (A) Cleistothecia (B) Perithecia
(C) ~~Chlamyospore~~ (D) Sclerotia

18. Most favourable conditions for development of powdery mildew disease is...

- (A) ~~Cool and dry weather~~ (B) Hot and dry weather
(C) Warm and humid weather (D) None of the above

Stem gall of coriander is caused by...

(A) *Colletotrichum circinans* (B) *Cercospora punicea*

(C) *Protomyces macrosporus* (D) *Erysiphe polygoni*

20. Brown ring in potato tuber is characteristic symptom of...

(A) Common scab

(B) Bacterial wilt

(C) Black scurf

(D) Late blight

21. Secondary spread of citrus gummosis takes place through.... spore.

(A) Oospore

(B) Chlamydospore

(C) Zoospore

(D) Sclerotia

22. Bunchy top of banana is transmitted by...

(A) *Myzus persicae*

(B) *Pentalonia nigronervosa*

(C) *Aphis gossypii*

(D) *Bemisia tabaci*

23. Stunting, yellowing, poor fruiting, shortening of internodes and severe root knotting is a characteristic symptoms of...

(A) Little leaf of brinjal

(B) Damping off of brinjal

(C) Root knot of brinjal

(D) Root rot of brinjal

24. Red rust of tea is caused by...

(A) *Cephaleuros mycoidea*

(B) *Venturia inaequalis*

(C) *Exobasidium vexans*

(D) *Dentrophthoe* spp.

25. *Hemileia vastatrix* causes.... disease in coffee.

(A) Red rust

(B) Blister blight

(C) Koleroga

(D) Rust

26. Olive green to grey velvety spots appear on young leaves, flower buds and sepals is characteristic symptoms of disease of apple.

(A) Powdery mildew

(B) Fire blight

(C) Scab

(D) Bacterial blight

27. Which is the cheapest source of management of the diseases?

(A) Cultural practices

(B) Timely fungicidal spray

(C) Disease free seed

(D) Resistant variety

28. Citrus canker is caused by...

(A) *Xanthomonas campestris* pv. citri

(B) *Erwinia amylovora*

(C) *Xanthomonas axonopodis*

(D) *Claviceps fusiformis*

pv. cyamopsidis

29. Which hormone is used in management of mango malformation?

(A) GA₃

(B) IBA

(C) NAA

(D) 2,4-D

Root

Root-knot disease of tomato is caused by.....

- (A) *Paratylenchus macrophallus* (B) *Heterodera avenae*
- (C) *Meloidogyne incognita* (D) *Anguina tritici*

(A)

Botryotrichum capsici causing chilli die back/ripe fruit rot produce.....structure.

- (A) Acervulus (B) Pycnidia
- (C) Cleistothecium (D) Sclerotia

(B)

Fire blight of apple is controlled by

- (A) Penicillin (B) Streptomycin sulphate
- (C) Tetracycline (D) Aureofungin

(A)

Which fungicide should be avoided for control of powdery mildew disease in cucurbits?

- (A) Sulphur dust (B) Thiophanate methyl
- (C) Mancozeb (D) Dinocap

(B)

Mosaic disease of cucurbit is transmitted by...

- (A) *Myzus persicae* (B) *Aphis gossypii*
- (C) *Aphis craccivora* (D) All

(D)

Which bio-control agent is effective for control of root rot and wilt diseases? (C)

- (A) *Metarrhizum anisoplae* (B) *Verticillium lacani*
- (C) *Trichoderma viride* (D) *Baueveria bassiana*

(D)

Diplodia rosarum causes..... disease in rose.

- (A) Rust (B) Powdery mildew
- (C) Wilt (D) Die back

(A)

White spot appear on upper surface of the leaf and turned ashy gray in later stage is a characteristic symptoms of

- (A) Powdery mildew (B) White rust
- (C) Downy mildew (D) Blister blight

(B)

Vein clearing, puckering, mosaic, mottle symptoms with typical circular and concentric rings are characteristics of

- (A) Papaya leaf curl (B) Papaya ring spot
- (C) Papaya mosaic (D) Papaya stem rot

(C)

Which guava disease produce cracks and lesions on stem?

- (A) Red rust (B) Wilt
- (C) Stem canker (D) Root rot

(A)

The pathogen of moko disease survives in

- (A) Suckers (B) Air
- (C) Water (D) Insects

x-x-x-x-x-x

DEPARTMENT OF PLANT PATHOLOGY
B.A. COLLEGE OF AGRICULTURE
ANAND AGRICULTURAL UNIVERSITY
ANAND

Multiple Choice Question Bank For Sixth Semester B.Sc.(Agri.)

Pl. Path. 6.5 : Diseases of Horticultural Crops and their Management

Select the appropriate answer from A, B, C, D

1. Acervuli is formed by (D)
(A) ~~Fusarium~~ (B) ~~Pythium~~ (C) ~~Alternaria~~ (D) Collectotricum
2. Fungal pathogen causing vascular wilt survive in soil in the form of (B)
(A) Oospore (B) Chlamyospore (C) Sclerotia (D) Conidia
3. Mottle leaf of citrus is caused due to deficiency of (A)
(A) Zinc (B) Iron (C) Boron (D) Calcium
4. Each ascus normally contains ----- number of ascospores (C)
(A) Four (B) Six (C) Eight (D) Two
5. Emisan is a : (B)
(A) Copper fungicide (C) Sulphur fungicide
(B) Organomercurial (D) None of above
6. The abnormal increase in the size of plant organ is known as: (B)
(A) Hypoplasia (B) Hypertrophy (C) Both A & B (D) Atrophy
7. The term necrosis indicate: (A)
(A) Death of cell (B) Curling (C) Blighting (D) Atrophy
8. A knob like structures sent in to the host cell by fungi to absorb the nutrients is known as: (C)
(A) Appresoria (B) Rhizomorpha (C) Haustoria (D) Sclerotia
9. Fungicides which are absorbed in to the system of the plant and move to the remote site of infection are known as: (C)
(A) Systemic (B) Fungistatic (C) Systemic (D) Dressers

35

State the name of pathogen which caused heavy losses to grape wine industry in France due to its epidemics in 1875: (C)

- (A) *Phytophthora infestans* (C) *Plasmopara viticola*
(B) *Helminthosporium oryzae* (D) *Uncinula necator*

1. Viruses which kills the bacteria are known as (C)

- (A) Virion (B) Antibodies (C) Bacteriophage (D) Virioids

2. Zoospores of Oomycetes fungi are: (A)

- (A) Biflagellate (B) Uniflagellate (C) Tinsel type (D) Whiplash type

13. Downy mildew disease can be effectively managed by spraying of: (A)

- (A) Metalaxyl MZ (B) Thiophanate methyl (C) Hexaconazole
(D) Carbendazim

14. Yellow vein mosaic of okra is transmitted through: (D)

- (A) Aphid (B) Thrips (C) Mites (D) White fly

15. Yellow vein mosaic of okra is caused by: (A)

- (A) Gemini virus (B) Potyvirus (C) Potexvirus (D) Comovirus

16. Mango malformation is common in: (B)

- (A) North-East India (C) South-East India
 (B) North-West India (D) South-West India

17. Which of the following fungicide was discovered accidentally by Millardet? (D)

- (A) Vitavax (B) Captan (C) Cerasan (D) Bordeaux mixture

18. Karathane is a : (A)

- (A) Fungicide (B) Insecticide (C) Nematicide (D) Bactericide

19. Potato leaf roll virus is transmitted through. (A)

- (A) *Myzus persicae* (C) *Pentalonia nigronervosa*
(B) *Aphis gossypii* (D) *Bemisia tabaci*

20. *Fusarium* wilt of banana is also known as: (A)

(A) Ectophytic (B) Endophytic (C) Paraphytic (D) None

32. Common scab of potato is caused by : (C)

- (A) Fungi (B) Bacteria (C) Actinomycetes (D) Mycoplasma

33. Many viral diseases can be controlled by spraying : (D)

- (A) Systemic fungicides (C) Bactericides
(B) Nematicides (D) Systemic insecticides

34. Mango malformation is caused by: (D)

- (A) *Alternaria solani* (C) *Meloidogyne incognita*
(B) *Fusarium oxysporum* (D) *Fusarium moniliformae*

35. Late blight of potato is associated with: (C)

- (A) Bengal famine (B) France famine (C) Irish famine (D) None

36. Late blight of potato was first introduced in India in the ----- (B)

- (A) Darjeeling hills (B) Nilgiri hills (C) Himalayan hills (D) Arvalli hills

37. Citrus gummosis is caused by: (C)

- (A) *Fusarium* spp. (C) *Phytophthora* spp.
(B) *Pythium* spp. (D) *Colletotricum* spp.

38. The disease caused by algae is known as: (C)

- (A) Brown rust (B) Yellow rust (C) Red rust (D) Stem rust

39. The common name of Tilt is: (B)

- (A) Difenconazole (B) Propiconazole (C) Hexaconazole (D) Penconazole

40. Bunchy top disease of banana was introduced in India from : (A)

- (A) Sri Lanka (B) South Africa (C) Europe (D) Bangladesh

41. State the name of grape vine disease with which the discovery of Bordeaux mixture is associated : (B)

- (A) Powdery mildew (C) Bird's eye spot

- (B) Downy mildew (D) None of above
- Root rot is favoured by soil moisture: (A)
- (A) Low soil moisture (B) High soil moisture
(C) Optimum soil moisture (D) Water stagnation in field
43. Most of the banana diseases spread in new area through: (C)
(A) Soil (B) Air (C) Suckers (D) Fruits
44. State the name of disease caused due to *Alternaria porri* in onion: (D)
(A) Rust (B) Onion smudge (C) Damping off (D) Purple blotch
45. State the name of causal organism causing powdery mildew in grapes: (D)
(A) *Podosphaera leucotricha* (C) *Plasmopara viticola*
(B) *Leveillula taurica* (D) *Uncinula necator*
46. The primary source of inoculum for *Fusarium* wilt disease is: (B)
(A) Cleistothecia (B) Chlamyospore (C) Perithecia (D) Sclerotia
47. The common name of Rogar is (D)
(A) Endosulfan (B) Chlorpyrifos (C) Quinalphos (D) Dimethoate
48. Garlic mosaic is transmitted through (D)
(A) Jassids (B) Whitefly (C) Leaf hopper (D) Aphids
49. State the name of causal organism causing Sigatoka disease in banana (B)
(A) *Alternaria alternata* (C) *Macrophomina phaseolina*
(B) *Gercospora musai* (D) *Colletotrichum* Sp.
50. Banana mosaic is transmitted through: (B)
(A) Red bug (B) Jassids (C) Aphids (D) Mites
51. Chilli leaf curl is transmitted through (C)
(A) Aphids (B) Jassids (C) White fly (D) Mites
52. Little leaf of brinjal is caused by (C)

(A) Virus (B) Viroids (C) Phytoplasma (D) Nematodes

State the name of sexual spores produced by *Phytophthora* (B)

(A) Chlamydospore (B) Oospore (C) Zygosporangium (D) Zoospore

54. State the name of insect which helps in transmission of citrus canker disease (C)

(A) Red mite (B) Leaf hopper (C) Leaf minor (D) Thrips

55. Blitox-50 contains: (C)

(A) Sulphur (B) Organo mercurials (C) Copper (D) Manganese

56. Stem gall of coriander is caused by: (C)

(A) *Cercospora punicae* (B) *Protomyces macrosporus*
(C) *Colletotricum circinans* (D) *Gloeosporium empelophagum*

57. *Cercospora punicae* infect mainly which part of pomegranate tree (B)

(A) Stem (B) Fruits (C) Leaves (D) Branches

57. Onion rust is (A)

(A) Autocious (B) Heterocious (C) Herbacious (D) All above

58. Thiophanate methyl is traded as: (C)

(A) Ridomil (B) Bavistin (C) Topsin M (D) Dithane M-45

59. *Pacilomyces lilacinus*, a bio-agent is used for the control of (D)

(A) Fungi (B) Bacteria (C) Algae (D) Nematodes

60. 200ppm = _____ gm / L. water. (A)

(A) 0.2 gm (B) 2 gm (C) 0.02 gm (D) 20 gm

61. Little leaf of brinjal is caused by (C)

(A) Virus (B) Viroid (C) Phytoplasma (D) Spiroplasma

62. 0.05% = _____ ppm. (C)

$$= \frac{5}{100} \times 10,000$$

Brown ring observed in the potato tuber due to :

(B)

- (A) Common scab ~~(B) Bacterial wilt~~ (C) Black scurf (D) Late blight

64. State the name of eumin variety which has tolerance against wilt:

(D)

- (A) GC-2 (B) GC-1 (C) GC-3 ~~(D) GC-4~~

65. Mottle leaf of citrus is due to deficiency of :

(B)

- (A) Fe ~~(B) Zn~~ (C) B (D) Mn

66. Secondary spread of citrus gummosis takes place through:

(C)

- (A) Oospore (B) Clamydospore ~~(C) Zoospore~~ (D) Sclerotia

67. Moko disease of banana is caused by:

(B)

- (A) *Mycosphaerella musicolla* (C) *Fusarium oxisporum*
~~(B) *Burkholderia solanacearum*~~ (D) Musa virus-1

68. Bunchy top of banana virus is transmitted through :

(C)

- (A) *Myzus persicae* ~~(C) *Pentalonia nigronervosa*~~
~~(B) *Aphis gossypii*~~ (D) *Bemisia tabaci*

69. Papaya leaf curl is transmitted through:

(D)

- (A) Aphids (B) Jassids (C) Thrips ~~(D) White fly~~

70. The mycelium of *Leveillula taurica* is:

(B)

- (A) Ectophytic ~~(B) Endophytic~~ (C) Paraphytic (D) None

71. State the name of viral disease, which is devastating in okra?

(D)

- (A) Yellow mosaic (B) Leaf curl (C) Little leaf ~~(D) Yellow vein mosaic~~

72. Powdery mildew of ber is caused by:

(D)

- (A) *Erysiphe polygoni* (C) *Leveillula taurica*
~~(B) *Oidium mangiferae*~~ ~~(D) *Oidium erysiphoides*~~

73. State the name of guava disease which forms cracks and lesions on stem:

(C)

✓ (C) Stem canker (D) Root rot

State the name of grapevine disease in which, the of berries cracks and the pulp get exposed :

- ✓ (A) Powdery mildew (C) Anthracnose
- (B) Downy mildew (D) Bird's eye spot

75. State the name of onion disease caused due to *Colletotricum circinans* : (D)

- (A) Rust (B) Purple blotch (C) Rhizome rot
- ✓ (D) Smudge

76. Red rust of tea is caused by: (D)

- (A) Fungi (B) Nematodes (C) Bacteria
- ✓ (D) Algae

77. State the name of causal organism which is responsible for stem bleeding disease in coconut : (B)

- (A) *Botrydiploia theobromae* (C) *Rhizoctonia solani*
- ✓ (B) *Ceratocystis paradoxa* (D) *Phytophthora katsurae*

78. Coffee rust was first reported from: (C)

- (A) Java (B) Fiji
- ✓ (C) Ceylon (D) Sumatra

79. State the name of grapevine disease in which the infected berries and bunches become mummified : (D)

- (A) Powdery mildew (B) Fan leaf virus (C) Anthracnose
- ✓ (D) Downy mildew

80. State the name of coffee disease caused by *Hemileia vastatrix* : (D)

- (A) Twig rot (B) Black rot (C) Kolerago
- ✓ (D) Rust

81. Usually brown and sunken spots with grey central area on bean pods is due to : (C)

- (A) Powdery mildew (C) Anthracnose
- (B) Downy mildew (D) Yellow mosaic virus

82. Drying of twigs from tip to down wards in rose is caused due to : (C)

- (A) *Phytophthora palmivora* (C) *Leveillula taurica*
- (B) *Sphaerotheca pannosa* (D) *Diplodia rosarum*

83. Olive green to grey velvety spots on apple young leaves, flower buds and sepals (C)