

# Objective Plant Pathology

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1. Tea rust is caused by
  - a) MLO
  - b) Virus
  - c) Bacteria
  - d) Algae
2. The *Colletotrichum falcatum* produces
  - a) Zygosporangia
  - b) Oospores
  - c) Ascospores
  - d) Conidiospores
3. Wilt of pigeon pea is caused by
  - a) *Fusarium udum*
  - b) *Gibberella indica*
  - c) *Rhizopus nigricans*
  - d) *Aspergillus flavus*
4. For the effective control of wilt, pigeon pea should be intercropped with
  - a) Maize
  - b) Pearl millet
  - c) Sorghum
  - d) Mung
5. The most important symptom of wilt of cotton (caused by *Fusarium oxysporum fsp vasinfectum*) is
  - a) Necrosis
  - b) Yellowing of tissues
  - c) Discolouration of tissues and plugging of vessels by hyphae
  - d) All of these
6. Wilt disease of sugarcane was first time reported in India from
  - a) Punjab
  - b) Tamil Nadu
  - c) Bihar
  - d) Uttar Pradesh
7. The pathogen responsible for charcoal rot of soybean is
  - a) *Ascochyta rabiei*
  - b) *Macrophomina phaseolina*
  - c) *Rhizoctonia solani*
  - d) *Penicillium chrysogenum*
8. The incidence of black scurf of potato is more in
  - a) Sandy soil
  - b) Clay soil
  - c) Alluvial soil
  - d) Loam soil
9. The attack of sheath blight of rice (caused by *Rhizoctonia solani*) is more during
  - a) Germination
  - b) Active tillering stage
  - c) Flowering
  - d) All of these
10. Resistance to broad range of Powdery mildew is offered by
  - a) RPW8
  - b) cf-8
  - c) Hm-1
  - d) Xa21
11. Differential resistance is also called as
  - a) Horizontal resistance
  - b) Vertical resistance
  - c) Apparent resistance
  - d) Field resistance
12. Suppressors of RNAi silencing
  - a) HC-component of Poty viruses
  - b) p<sup>25</sup> protein of potato virus X
  - c) Both a and b
13. RISC is formed by
  - a) ssRNA+ Proteins
  - b) Proteins
  - c) ssRNA
  - d) dsRNA
14. Viroids are discovered by
  - a) Diener
  - b) Prusiner
  - c) Doi
  - d) Kassanis
15. Pathogenicity of bacteria is controlled by
  - a) Type-III
  - b) Type-II
  - c) Type-I
  - d) Type-IV

16. Mycoplasma cell membranes have how many layers  
a) One layer      b) Two layers      c) Three layers      d) Four layers
17. Leaf puckering as a result of different growth rates in adjoining tissue is  
a) Savoying      b) Hyperplasia      c) Sarcody      d) Intumescence
18. The uredospores of *Puccinia graminis* are disseminated by  
a) Wind      b) Animals      c) Insect      d) Birds
19. G + C content of prokaryotes is  
a) 20 %      b) 30 %      c) 50%      d) 70%
20. Bacterial cell division mainly by  
a) Binary division      b) Fragment      c) Budding      d) None of these
21. Shape of MLO is  
a) Rigid      b) Cuboid      c) Circular      d) Polymorphic
22. Sensitivity of ELISA  
a) 1-10 ng/ml      b) 10-20 ng/ml      c) 0.2-1 ng/ml      d) 5-20 ng/ml
23. Teichoic acid found in  
a) Fungi      b) Gram + ve bacteria      c) Gram - ve bacteria      d) Protozoa
24. Father of Indian bacteriology  
a) Louis Pasteur      b) Robert Koch      c) Doi      d) E.F.Smith
25. Plant Pathology written by  
a) R.S.Singh      b) Agrios      c) V.S.Singh      d) A.P.Sinha
26. Rickettsia disease is caused by  
a) Gram –ve fastidious bacteria      b) Gram +ve fastidious bacteria  
c) *Clavibacter xyli*      d) Both b and c
27. In north India and central India, the black rust inoculum cause from  
a) South      b) Hilly area      c) From USA      d) From Netherlands
28. Teliospore of rust has germ pores in number  
a) 1      b) 2      c) 3      d) 4
29. Rice blast pathogen perfect stage is  
a) *Pyricularia oryzae*      b) *Magnaporthe grisea*  
c) *Helminthosporium oryzae*      d) *Rhizoctonia solani*
30. Smut of maize is caused by  
a) *Ustilago tritici*      b) *Ustilago maydis*      c) *Ustilago hordei*      d) None of these
31. Virus capsid is made up of  
a) Protein      b) Carbohydrate      c) Lipid      d) Nucleic acid
32. Phyllody disease of sesamum spread by

- a) Leaf hopper    b) Jassid    c) Aphid    d) Whitefly
33. Fungi imperfecti includes in  
a) Deuteromycotina    b) Basidiomycotina    c) Ascomycotina    d) Oomycotina
34. Mycoviruses contain  
a) ds RNA    b) ds DNA    c) ss RNA    d) ss DNA
35. Hrp genes are discovered by  
a) Albersheim    b) Lindgren & Peet    c) Morris    d) Staskawicz
36. Microorganisms in Diseased Plants is written by  
a) R.S.Singh    b) C.D.Mayee    c) S. Nagarajan    d) A.Mahadevan
37. Who recognized hypersensitive response in bacteria  
a) Stakmann    b) Z Klement    c) H.M.Ward    d) Biffen
38. Downy mildew of pea caused by  
a) *Perenospora pisi*    b) *Albugo candida*    c) *Erysiphe polygoni*    d) None of these
39. Father of Indian Mycology  
a) E.J.Butler    b) K.C.Mehta    c) Mundkur    d) R.S.Singh
40. Renowned scientist Norman E. Borlaug belongs to  
a) Agronomy    b) Genetics    c) Entomology    d) Plant Pathology
41. In 2005 which pathological scientist got Borlaug award  
a) Rattan lal    b) V.L.Chopra    c) C.D.Mayee    d) S.Nagarajan
42. Which of the following bacteria generally used in genetic engineering for transfer of character from one organism to another  
a) *Bacillus thuringiensis*    b) *Pseudomonas syringe*  
c) *Rhizobium meliloti*    d) *Agrobacterium tumefaciens*
43. Micrografting is used to produce plants free from  
a) Virus    b) RLO's    c) MLO's    d) Bacteria
44. Black heart is a physiological disorder of  
a) Tomato    b) Chilli    c) Potato    d) Cabbage
45. Which of the following is not correctly matched?  
a) Mustard- white rust    b) Paddy-Brown rust  
c) Wheat-Red rust    d) Groundnut – Tikka
46. Tungro disease of rice is spread by  
a) *Nephotettix virescense*    b) *Sogatella fucifera*  
c) *Nilaparvatha leugens*    d) *Thrips tabaci*

47. The term hypersensitive response is given by  
 a) Stakmann      b) Erickson      c) H.M.Ward      d) W.A.Orton
48. Soil microorganism are most active at  
 a) 18-20 °C      b) 26-28°C      c) 30-30°C      d) 34-36°C
49. VAM is  
 a) Bacteria      b) Fungi      c) Virus      d) Algae
50. Which of the following is not a disease of apple?  
 a) Bird eye      b) Powdery mildew      c) Downy mildew      d) Bunchy top
51. Buck eye rot is disease of which crop  
 a) Water chestnut      b) Sweet potato      c) Pods of garden pea      d) Tomato fruits
52. The major storage fungi that affects the food grain is  
 a) Rhizobium      b) Mucor      c) Cercospora      d) Aspergillus
53. Yellow leaf mosaic of bhendi crop spreads by  
 a) Jassids      b) Borers      c) Jassid and borers      d) Whiteflies
54. Polymorphism in fungi is first noticed by  
 a) Anton de Bary      b) Tulsane brothers      c) E.M.Fries      d) B. Prevost
55. Which of the disease (s) induce floral abnormalities?  
 a) Downy mildew of mustard      b) Green ear of bajra  
 c) White rust of crucifers      d) Both (b) and (c)
56. Which one of the following microbial agents is being commercially exploited as biocontrol agent?  
 a) *Bacillus subtilis*      b) *Penicillium notatum*  
 c) *Sclerotium rolfsi*      d) *Trichoderma viride*
57. Panama disease of banana is prevented by  
 a) Spraying zinc carrier      b) Spraying copper fungicide  
 c) Application of lime to the soil      d) Providing adequate irrigation
58. Which one the following fungicides is not systemic in nature  
 a) Vitavax      b) Thiram      c) Benlate      d) Topsin
59. Which one of the following is/are entomopathogenic fungi?  
 a) *Beauveria bassiana*      b) *Metarrhizium anisopliae*  
 c) *Trichoderma harzianum*      d) Both (a) and (b)
60. Which penicillium species used in Cheese making  
 a) *Penicillium notatum*      b) *Penicillium roqueforti*  
 c) *Penicillium diversicaudatum*      d) *Penicillium crysogenum*

61. CARNA-5

- a) Satellite RNA      b) Satellite Virus      c) Virus      d) Bacteria

62. Bacterial diseases are controlled by use of chemicals

- a) Kelthane      b) fungicide      c) Antibiotics      d) Viricides

63. Application of potash increases

- a) Resistance to water logging      b) Frost resistance in plants  
c) Disease resistance in plants      d) None of these

64. Decomposition of organic matter in submerged soil is carried out by

- a) Bacteria      b) Actinomycetes      c) Fungi      d) Earthworm

65. The sedimentation coefficient for most of viruses is between

- a) 50-200S      b) 100-200S      c) 200-300S      d) 25-50S

66. Most of viruses have buoyant density between

- a) 1.2 and 1.6 g/cm<sup>3</sup>      b) 1.4 and 1.8 g/cm<sup>3</sup>      c) 1.0 and 1.2 g/cm<sup>3</sup>      d) 1.8 and 2 g/cm<sup>3</sup>

67. Phenols present in the red scales of onion

- a) Catechol      b) Procatechoic acid      c) Saponin      d) a&b

68. Alteration of generation is seen in

- a) Alternaria      b) Allomyces      c) Neovassia      d) Tilletia

69. Local and systemic infection is seen in

- a) White rust of crucifers      b) Late blight of potato      c) Coffee rust      d) Rice blast

70. Viruses contain

- a) RNA      b) DNA      c) Both RNA and DNA      d) Either RNA or DNA, never both

71. The viruses which are usually helped or accompanied by smaller spherical particles of another serologically unrelated virus is known as

- a) Satellite virus      b) Gemini viruses      c) Viroid      d) Capsid

72. Select the correct pair from the following

- a) Hypotrophy- decrease in size      b) Hypertrophy- increase in size  
c) Hyperplasia- increase in number      d) All of these

73. In plants buckling, puckering and blistering symptoms are produced by

- a) Bacteria      b) Fungi      c) Viruses      d) Mycoplasma

74. The fungi which transmit plant viruses belong to class

- a) Basidiomycetes      b) Oomycetes      c) Zygomycetes      d) Plasmodiophoromycetes

75. For quick and accurate detection of viruses can be done by

- a) ELISA      b) HADAS      c) IEM      d) All of these

76. Potato viruses are spread by  
a) Aphids      b) Jassids      c) Nematodes      d) Tubermoth
77. Most of the plant viruses transmitted by  
a) Whiteflies      b) Plant hopper      c) Leaf hopper      d) Aphids
78. Bunchy top of papaya (caused by MLO) is spread by  
a) Nematodes      b) Fungi      c) Whitefly      d) Leaf hoppers
79. Yellow mosaic of legumes was first reported in India from  
a) Shimla      b) Solan      c) Delhi      d) Kanpur
980. Potato spindle tuber disease is transmitted by  
a) Mechanically      b) biologically      c) Water      d) All of these
81. Select the correct pair from the following matched items:  
a) Holo stem parasite- *Cuscuta reflexa*      b) Stem semi parasite  
c) Holo root parasite – *Orobanche*      d) All of these
82. Suicidal germination takes place in  
a) Dodder      b) Striga      c) Loranthus      d) *Dendrophthoe falcata*
83. Chitin is composed of  
a) Chitinin      b) Glucose      c) Cerasan      d) N-acetyl glucosamine
84. Damping off and leaf blights are very effectively checked by  
a) Bordeaux mixture b) Burgundy mixture c) Thiram d) Copper oxychloride
85. The organo-mercurials fungicides used for dry seed treatment usually contain mercury  
a) 0.5%      b) 1.0 %      c) 2.0 %      d) 4.0%
86. Dinocap (methyl heptyl dinitrophenyl crotonate) is sold in market as  
a) Bravo      b) Dexon      c) Botron      d) Karathane
87. Von Schleming and Kulka first time demonstrated the systemic activity of fungicides in  
a) 1956      b) 1966      c) 1972      d) 1976
88. Select the fungicides:  
a) Pyrimidines      b) Triazoles      c) Metalaxyl      d) All of these
89. Infective spores in rust life cycle are  
a) Uredospores and Aeciospores      b) Uredospores and Teliospores  
c) Teliospores and Basidiospores      d) Pycniospores and Uredospores
90. Tick out the pair which is wrongly matched  
a) Oxycarboxin- Plantvax      b) Carboxin- Benlate  
c) MBC-Bavistin      d) Benomyl- Benlate
91. Most commonly used transposon in molecular plant pathology is  
a) Bn6      b) Hm1      c) Tn5      d) T4

92. Black or Silvery scurf of potato is caused by  
a) *Sclerotium rolfsii*                      b) *Rhizoctonia solani*  
c) *Ralstonia solanacearum*              d) *Phytophthora infestans*
93. Forecasting system developed for apple scab on the basis of  
a) Amount of inoculum                  b) Leaf wetness period and temperature  
c) RH    d) Temperature
94. Largest known viroid  
a) Citrus Exocortosis viroid              b) Potato spindle tuber viroid  
c) Coconut cadang cadang viroid      d) Apple scar viroid
95. The pathogenicity of a viroid is determined by which region  
a) Pathogenicity region & Terminal region      b) Terminal region & Variable region  
c) central conserved region & Pathogenicity region      d) Variable region
96. The science which deals with cause of the plant diseases and nature of the causal agent  
a) Fertilization              b) Etiology              c) Aetiology              d) Both (b) and (c)
97. The sexual, thick walled and resting spores of the rust fungi is known as  
a) Basidiospores              b) Urediospores              c) Teliospores              d) Aeciospores
98. Who discovered the downy mildew for the first time in India?  
a) E.J. Butler              b) J.F. Dastur              c) B.B. Mundkur              d) K.R. Kirtikar
99. Which one of the following is a single cell fungi?  
a) Yeast              b) Aspergillus              c) Penicillium              d) Alternaria
100. What is the source of Agar Agar?  
a) Bacteria              b) Fungi              c) Mycoplasma              d) Algae

## Answers

1. <b>d</b>	11. <b>b</b>	21. <b>d</b>	31. <b>a</b>	41. <b>d</b>	51. <b>a</b>	61. <b>a</b>	71. <b>a</b>	81. <b>d</b>	91. <b>c</b>
2. <b>d</b>	12. <b>c</b>	22. <b>a</b>	32. <b>a</b>	42. <b>d</b>	52. <b>d</b>	62. <b>c</b>	72. <b>d</b>	82. <b>b</b>	92. <b>b</b>
3. <b>a</b>	13. <b>a</b>	23. <b>b</b>	33. <b>a</b>	43. <b>a</b>	53. <b>c</b>	63. <b>c</b>	73. <b>c</b>	83. <b>d</b>	93. <b>a</b>
4. <b>c</b>	14. <b>a</b>	24. <b>d</b>	34. <b>a</b>	44. <b>c</b>	54. <b>b</b>	64. <b>a</b>	74. <b>d</b>	84. <b>d</b>	94. <b>a</b>
5. <b>c</b>	15. <b>a</b>	25. <b>b</b>	35. <b>b</b>	45. <b>c</b>	55. <b>d</b>	65. <b>a</b>	75. <b>d</b>	85. <b>b</b>	95. <b>a</b>
6. <b>c</b>	16. <b>c</b>	26. <b>d</b>	36. <b>d</b>	46. <b>a</b>	56. <b>d</b>	66. <b>a</b>	76. <b>a</b>	86. <b>d</b>	96. <b>d</b>
7. <b>b</b>	17. <b>a</b>	27. <b>a</b>	37. <b>b</b>	47. <b>d</b>	57. <b>c</b>	67. <b>d</b>	77. <b>d</b>	87. <b>b</b>	97. <b>c</b>
8. <b>a</b>	18. <b>a</b>	28. <b>b</b>	38. <b>a</b>	48. <b>d</b>	58. <b>b</b>	68. <b>b</b>	78. <b>d</b>	88. <b>d</b>	98. <b>a</b>
9. <b>b</b>	19. <b>a</b>	29. <b>b</b>	39. <b>a</b>	49. <b>b</b>	59. <b>d</b>	69. <b>a</b>	79. <b>c</b>	89. <b>a</b>	99. <b>a</b>
10. <b>a</b>	20. <b>a</b>	30. <b>b</b>	40. <b>d</b>	50. <b>d</b>	60. <b>b</b>	70. <b>d</b>	80. <b>a</b>	90. <b>b</b>	100. <b>d</b>



