MUTLIPLE CHOICE QUESTIONS

FUNGI AND PLANT PATHOLOGY

1. Erysiphe causes the disease
   (i) powdery mildews, (ii) downy mildews
   (iii) covered smut (iv) late blight of potato

2. The coprophilic fungi inhabit
   (i) dung substratum (ii) dead wood
   (iii) decaying leaves (iv) food articles

3. Mycotrophy is the symbiosis of a fungus with
   (i) bacteria (ii) algae
   (iii) bryophytes (iv) other fungi

4. The process of self-fertilization in fungi is known as
   (i) automixis (ii) amphimixis
   (iii) spermatization (iv) somatogamy

5. Diplanetism is exhibited by
   (i) Phytophthora (ii) Saprolegnia
   (iii) Mucor (iv) Albugo

6. The position of the antheridium in connection with the oogonia in Albugo is called as
   paragynous when the antheridium
   (i) grows beside the oogonium (ii) encircles the oogonium
   (iii) remains at the base of the oogonium, (iv) grows on the oogonial wall

7. The fertile portion in the fruiting body of Lycoperdon is called
   (i) Gleba (ii) Peridium (iii) Hymenium (iv) Gills

8. Macrocyclic rust is the name given to some fungi,
   (i) which produces bigger spores
   (ii) where all the five spore stages are produced
   (iii) which completes its life-cycle on a single host
   (iv) which selects many hosts to complete its life-cycle

9. What is the fruit body of Penicillium called
   (i) perithecium (ii) cleistothecium
   (iii) apothecium (iv) stroma

10. Rhizopus multiplies by the production of
    (i) zoospores (ii) conidiospores
    (iii) sporangiospores (iv) chlamydospores

11. Sclerotium is a perennating and vegetatively reproducing body, the structure of which has
    (i) hyphae aggregated to form strands,
    (ii) loosely interwoven hyphae which have not lost their identity,
    (iii) compactly---- interwoven hyphae which have lost their individuality
    (iv) thick-walled hyphae giving a rounded or irregular configuration.
12. The obligate parasitic fungi absorb their nourishment from the host cells through  
   (i) the surface (ii) haustoria  
   (iii) appressoria (iv) rhizoids

13. Biological specialization is a term used for fungus which:  
   (i) can infect differential hosts, (ii) shows host specialization  
   (iii) can grow in a variety of substrata (iv) are biologically useful

14. Sporangial proliferation in Saprolegnia will be characterized by the  
   (i) development of secondary sporangium into the primary sporangium  
   (ii) the primary sporangium cuts off spores from its apex  
   (iii) production of new sporangia from the vegetative hypha  
   (iv) germination of spore into a mycelium.

15. Which of the following depicts the position of antheridium in Penicillium in connection  
    with the ascogonium?  
   (i) coils loosely around the ascogonium  
   (ii) rows besides the ascogonium  
   (iii) remains at the base of the ascogonium,  
   (iv) approaches the ascogonium only at its tip.

16. The fungus which is so important for its use in genetic studies is  
   (i) Aspergillus (ii) Rhizopus,  
   (iii) Penicillium (iv) Neurospora

17. White rust of crucifer is caused by:  
   (i) Puccinia, (ii) Utilago  
   (iii) Cystopus (iv) Peziza

18. Microconidia are found in  
   (i) Claviceps, (ii) Neurospora  
   (iii) Rhizoctonia (iv) Pyricularia

19. In Agaricus, the cell in which reduction division takes place is known as  
   (i) basidiospore (ii) basidium  
   (iii) chlamydoospore (iv) None of these

20. Coprophilous fungi are growing in  
   (i) grasses, (ii) dung,  
   (iii) animals, (iv) wood

21. Stroma is  
   (i) compact somatic hyphae with fruit bodies  
   (ii) loosely interwoven hyphae,  
   (iii) a small hyphal branch (iv) a group of spores.

22. Somatogamy is the  
   (i) fusion of gametes, (ii) fusion of vegetative cells,  
   (iii) contact between two gametangia (iv) copulation between two gametangia.
23. Fungus Alternaria solani belongs to class:
(i) Ascomycetes, (ii) Deuteromycetes
(iii) Schizomycetes, (iv) Oomycetes.

24. The protective covering of sterile hyphae around an ascocarp is termed as:
(i) periderm, (ii) peridium
(iii) appendages, (iv) epiderm

25. In Penicillium conidia are produced:
(i) in sori consisting of several conidiophores,
(ii) in branched conidiophores,
(iii) on unbranched conidiophores
(iv) on both branched or unbranched conidiophores

26. A haustorium of a fungus is meant for
(i) fixing up to the mycelium to the host, (ii) increasing the spread of the disease
(iii) reproduction of the fungus (iv) absorbing nourishment from the host

27. The sexual reproduction of Puccinia graminis is of the type known as
(i) somatogamy (ii) dikaryotization
(iii) spermatisation (iv) automixis

28. In Agaricus the fruiting body is made up of:
(i) tertiary mycelium (ii) primary mycelium
(iii) secondary mycelium (iv) diploid mycelium

29. In the Ascomycetes karyogamy occurs within the
(i) ascogonium (ii) antheridium
(iii) ascus (iv) ascogenous hypha

30. Haustoria are produced in the case of mycelium which is:
(i) both intracellular and endoparasitic, (ii) ectoparasite,
(iii) both intercellular and endoparasite (iv) either ectoparasitic or intercellular

31. Perfect stage of fungus means:
(i) when the fungus is perfectly healthy (ii) when it reproduces asexually
(iii) when it reproduces sexually, (iv) when it forms perfect resting spores

32. Penicillin was discovered by:
(i) Alexander Fleming (ii) Edward Jenner
(iii) Louis Pasteur (iv) lan Fleming

33. In the fruit body of Agaricus basidia are produced on the:
(i) gills (ii) pileus (iii) stipe (iv) rhizomorph

34. A macrocyclic fungus is the one which
(i) needs two different hosts to complete its life-cycle,
(ii) produces many types of spores to complete the life-cycle
(iii) does not show any asexual reproduction
(iv) has a prolonged life-cycle
35. The gametes taking part in the sexual reproduction of Rhizopus are
   (i) uninucleate  (ii) binucleate
   (iii) multinucleate  (iv) dikaryotic

36. The classification of the fungi is based mainly on:
   (i) The structure of vegetative mycelium  (ii) the asexual stage,
   (iii) the sexual reproductive stage,
   (iv) both the mycelial structure and sexual stages.

37. A phragmo-basidium means
   (i) an entire basidium which is fully reproductive,
   (ii) a septate basidium which for all purposes is one structure,
   (iii) a septate basidium where only one cell is reproductive,
   (iv) a septate basidium where both cells are reproductive.

38. The phenomenon of heterothallism was first discovered in Mucorales by
   (i) Charles Bessey  (ii) Gaumann,
   (iii) Blakeslee  (iv) Alexopoulos

39. The dikaryotic mycelium of heterothallic forms is characterized by having in each of its
cells.
   (i) single 2n nucleus,
   (ii) two diploid nuclei belonging to opposite strains
   (iii) two haploid nuclei belonging to opposite strains,
   (iv) two haploid nuclei of similar strains

40. A sclerotium refers to a modified mycelium which is:
   (i) an underground structure  (ii) a hard resting body
   (iii) mainly a food storing organ  (iv) easily carried off by wind

41. In Phytophthora the asexual reproductive bodies behave as :
   (i) conidia,  (ii) sporangia
   (iii) conidiosporangia,  (iv) both conidia and conidiosporangia

42. The azygospores produced in Macorales are formed from
   (i) zygotes,  (ii) unfertilized gametangia
   (iii) vegetative mycelium  (iv) the female sex organ.

43. Early blight of potato is caused by
   (i) Albugo candida,  (ii) Phytophthora infestans
   (iii) Alternaria solani

44. The phenomenon of heterothallism was observed for the first time in the order
   (i) Erysiphales  (ii) Mucorales,
   (iii) Ustilaginales  (iv) none of these

45. Tikka disease of groundnut is caused by
   (i) Aspergillus  (ii) Puccinia
   (iii) Cercospora  (iv) Fusarium
46. The name ‘smut diseases’ is given to those produced by Ustilago because
(i) its mycelium is black in colour
(ii) it parasitizes cereals
(iii) the host becomes completely black,
(iv) the fungus produces black sooty spore masses

47. White rust of crucifers is a pseudo-rust because
(i) the disease is not caused by basidiomycetous members
(ii) the colour of the pustule is not red
(iii) the disease is seen on crucifers
(iv) the disease is not seen on wheat

48. Wilt of arhar is caused by
(i) Pythium (ii) Alternaria (iii) Colletotrichum (iv) Fusarium

49. The whip smut of sugarcane is caused by
(i) Ustilago maydis (ii) Ustilago hordei
(iii) Ustilago scitaminea (iv) Ustilago nuda

50. Downy mildews are caused by the members of
(i) Erysiphales (ii) Taphrinales
(iii) Ustilaginales (iv) Peronosporales

51. The rusts are caused by
(i) Ustilaginales (ii) Peronosporales
(iii) Uredinales (iv) Erysiphales

52. The wall of hyphae of Rhizopus is made up of:
(i) cellulose (ii) callose
(iii) pectin (iv) chitin

53. Rhizopus resembles a moss because in both develop
(i) mycelia (ii) hyphae
(iii) archegonia (iv) spore

54. Penicillin was extracted by:
(i) Flemming (ii) Huxley
(iii) Lamarck (iv) Brown

55. Yeast is an important source of
(i) Vitamin C (ii) riboflavin
(iii) sugar (iv) protein

56. Fungi occurring on wood are:
(i) epibiotic (ii) eucarpic
(ii) epixylic (iv) epigean

57. Which is an edible fungus
(i) Rhizopus (ii) Mucor
(iii) Agaricus (iv) Polyporus
58. Gibberellin was first extracted from
   (i) bacteria                (ii) fungi
   (iii) virus                (iv) algae

59. The mushroom is
   (i) a plant consisting of fine green threads (ii) an edible fungus
   (iii) a bryophyte devoid of root             (iv) a flowering plant

60. The brown gills of the mushroom
   (i) have no function to perform             (ii) are meant for its respiration
   (iii) help the plant to float in water after heavy rains
   (iv) bears spores which help in reproduction

61. Toadstools cannot manufacture their own food because
   (i) they do not have roots                   (ii) they do not have leaves
   (iii) they do not have chlorophyll           (iv) they do not need food for their growth

62. Reproduction in ‘fairy rings’ occurs by means of
   (i) seeds                                (ii) spores
   (iii) flowers                             (iv) gills

63. Fungi are always
   (i) parasitic                             (ii) saprophytic
   (iii) autotrophic                         (iv) heterotrophic

64. An organism which is normally a saprophyte, but can also become a parasite is called
   (i) facultative saprophyte                 (ii) partial saprophyte
   (iii) facultative parasite                 (iv) partial parasite

65. Which of the following is a good example of heterothallism?
   (i) Pteris                              (ii) Rhizopus
   (iii) Cycas                              (iv) Casteor bean

66. Why zygospores are not generally formed in a culture of Rhizopus developed from a single spore ?
   (i) due to lack of light                  (ii) due to shortage of oxygen
   (iii) due to absence of plus (+) and (-) strains of mycelium
   (iv) None of these

67. Columella is present in the sporangium of
   (i) Spirogyra                         (ii) yeast
   (iii) Ulothrix                        (iv) Rhizopus

68. A mushroom is
   (i) saprophyte                         (ii) photosynthetic organism
   (iii) facultative parasite             (iv) obligate parasite

69. What is the mode of nutrition in Rhizopus?
   (i) autotrophic                       (ii) parasitic
   (iii) symbiotic                       (iv) saprophytic
70. Which of the following diseases is caused by a fungus
   (i) cholera  (ii) rust of wheat
   (iii) T.B.  (iv) tetanus

71. Mycology is the study of
   (i) Algae  (ii) Fungi
   (iii) Bryophytes  (iv) Pteridophytes

72. Which is an edible fungus
   (i) Rhizopus  (ii) Mucor
   (iii) Agaricus  (iv) Polyporus

73. Which of the following diseases is caused by a fungus?
   (i) small-pox  (ii) tuberculosis
   (iii) cancer  (iv) black rust of wheat

74. Which of the following is a good example of heterothallism?
   (i) Spirogyra  (ii) Rhizopus
   (iii) Pinus  (iv) castor bean

75. In which of the following, respiration in absence of oxygen too takes place
   (i) man  (ii) yeast
   (iii) potato  (iv) Spirogyra

76. Gills are seen in
   (i) bacteria  (ii) Oscillatoria
   (iii) Ulothrix  (iv) Agaricus

77. The zygospore of Mucor is thick-walled and its colour is
   (i) blue  (ii) white
   (iii) green  (iv) black

78. The vegetative cells of the Saccharomyces are recognised by the presence of
   (i) chloroplasts
   (ii) a large vacuolated nucleus
   (iii) a small nucleus without a nuclear membrane
   (iv) a distinct cell wall

79. Heterothallism was discovered by
   (i) Bessey  (ii) Blakeslee
   (iii) Alexopoulos  (iv) Leuwenhoek

80. The structure in which the ascospores are formed in
   (i) basidium  (ii) sporangium
   (iii) ascus  (iv) gametangium

81. Fungal hyphae penetrate hard cell wall of their host with the help of
   (i) enzymes  (ii) hormones
   (iii) sharp tips  (iv) haustoria
82. Loose smut of wheat is caused by
   (i) Ustilago tritici (ii) Cystopus
   (iii) Puccinia (iv) Aspergillus

83. Obligate parasites are those organisms which
   (i) are essentially saprophyte but can become parasite
   (ii) are essentially parasite but can also become saprophyte
   (iii) live only in dead and decaying organic matter
   (iv) live only in living hosts

84. Fermentation of sugar occurs by
   (i) Mucor (ii) Saccharomyces
   (iii) Rhizopus (iv) Penicillium

85. Fungal spores produced asexually at the tip of hypha are called
   (i) conidia (ii) sporangiophores
   (iii) spores (iv) arthrospores

86. Mushroom is
   (i) plant consisting of fine gress threads (ii) an edible fungus
   (iii) bryophytes (iv) flowering plants

87. Some haploid structures of Rhizopus include the
   (i) mycelia, sporangia and spores (ii) hyphae zygote and sporangia
   (iii) mycelia, zygospore and spores (iv) mycelia, zygospore and suspensor

88. Eucarpic fungi are those
   (i) in which the habitat is saprophytic, and mycelium coenocytic
   (ii) in which reproductive organs arise from a part of thallus while rest carries out
      somatic function
   (iii) in which entire thallus may be converted into reproductive structure so that somatic
      and reproductive phases do not occur in some individual
   (iv) None of these

89. Fungal spores produced asexually at tips or side of hyphae are called
   (i) Sporangiospores (ii) Anthrospores
   (iii) Conidia (iv) Spores

90. When two host species are required for completion of parasitic fungi life-cycle, this
    condition is described as
   (i) autoecism (ii) autotrophic
   (iii) heteroecism (iv) heterokaryotic

91. Mycorrhiza is a term to indicate
   (i) fungus association with stem (ii) bacteria association with root
   (iii) fungi association with root (iv) study of fungi

92. After fusion of sexual gametes in Mucor the resultant structure is known as
   (i) oospore (ii) cleistothecium (iii) zygospore (iv) zygote
93. Heterothallism was discovered by
(i) Blakeslee (ii) Faraday (iii) Alexopoulos (iv) Gaumann
94. Clamp connections are very common in
(i) Ascomycetes (ii) Basidiomycetes (iii) Phycomycetes (iv) Deuteromycetes
95. Haplo-diplo-biontic life-cycle is exhibited by
(i) yeast (ii) Mucor (iii) Penicillium (iv) Aspergillus
96. The worker associated with mycology
(i) S.R. Kashyap (ii) A.J. Eames (iii) A.F. Blakeslee (iv) Y. Bhardwaja
97. Heterothallism in Mucorales was discovered in
(i) 1904 (ii) 1918 (iii) 1927 (iv) 1931
98. Sort out the father of Indian mycology and plant pathology
(i) K.C. Mehta (ii) B.P. Pal (iii) E.J. Butler (iv) B.B. Mundkur
99. The aseptate mycelium is found in
(i) lower fungi (ii) higher fungi (iii) fungi imperfecti (iv) none of these
100. The mycelium of Erysiphe is
(i) aseptate (ii) septate (iii) both (i) and (ii) (iv) none of these
101. Neurospora sitophila is known as:
(i) black mold (ii) red mold (iii) blue mold (iv) green mold
102. The spermatization takes place in
(i) Neurospora (ii) Penicillium (iii) Peziza (iv) Erysiphe
103. One of the following represents cup fungi
(i) Peziza (ii) Morchella (iii) Agaricus (iv) Amanita
104. Peziza is a member of
(i) Phycomycetes (ii) Ascomycetes (iii) Basidiomycetes (iv) Deuteromycetes
105. The basidiospores are
(i) exogenous spores (ii) endogenous spores (iii) both (i) & (ii), (iv) none of these
106. Black rust of wheat is caused by
(i) Puccinia graminis (ii) Puccinia recondita (iii) Puccinia striformis (iv) Puccinia glumarum
107. The sexual reproduction lacks in
(i) Ascomycetes (ii) Basidiomycetes (iii) Phycomycetes (iv) Deuteromycetes
108. Only asexual reproduction is found in
(i) Ascomycetes (ii) Basidiomycetes (iii) Oomycetes (iv) Deuteromycetes
109. Alternaria solani causes:
(i) late blight of potato
(ii) wart of potato
(iii) early blight of potato
(iv) leaf curl of potato

110. ‘Target board effect’ is caused by
(i) Alternaria
(ii) Colletotrichum
(iii) Pyricularia
(iv) Helminthosporium

**ANSWERS**

1. (i) 2. (i) 3. (iv) 4. (iv) 5. (i) 6. (i) 7. (i)
29. (iv) 30. (iv) 31. (iv) 32. (i) 33. (i) 34. (ii) 35. (iii)
36. (iv) 37. (ii) 38. (iii) 39. (iii) 40. (ii) 41. (ii) 42. (ii)
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57. (iii) 58. (ii) 59. (ii) 60. (iv) 61. (iii) 62. (ii) 63. (iv)
64. (iii) 65. (ii) 66. (iii) 67. (iv) 68. (i) 69. (iv) 70. (ii)
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78. (ii) 79. (ii) 80. (iii) 81. (iv) 82. (i) 83. (iv) 84. (ii)
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99. (i) 100. (ii) 101. (i) 102. (i) 103. (i) 104. (ii) 105. (i)
106. (i) 107. (iv) 108. (iv) 109. (iii) 110. (i)