## GOVT AUTONOMOUS COLLEGE ROURKELA

## +3 2nd SEMESTER

## Core III

# Long Question

1. Name the disease caused by Synchitrium endobioticum. Describe the life cycle of this fungus.
2. Write an account of life cycle of Albugo or Phytophthora. Give the answer with suitable diagram.
3. Explain asexual life cycle of Peziza with well labeled diagram.
4. Give an illustrated account of life history of Ustilago.
5. Give an illustrated account of fruiting body of Agaricus.
6. What do you mean by symbiotic association? Describe the external and internal structure of Lichen with suitable diagram.
7. Describe the structure and reproduction of Alternaria.
8. Symptoms, etiology and control measure of any one disease - White rust of crucifer or loose smut of wheat.
9. Symptoms and control measure of any one disease Early blight of potato or Tikka disease of ground nut.
10. Give an illustrated account of the disease cycle of Loose smut of wheat.
11. Write the symptoms and control of bacterial disease Citrus canker.
12. Give an account of structure of plant virus and their symptoms on tobacco plant.
13. Write short notes on
    a. Occurrence and general characteristic of Lichen.
    b. Range of thallus organization of Lichen.
    c. Economic importance of Lichen.
14. Write short notes on
    a. Roll of fungi in biotechnology.
    b. Application of fungi in food industry.

**SHORT NOTES**

1. Thallus organization of fungi.
2. Difference between Hyperplasia and Hypertrophy.
3. Asexual reproduction of Albugo.
4. Asexual reproduction of Phytophthora.
5. Symptoms of white rust disease.
6. Apothecium cup of Peziza.
7. Symptoms of loose smut disease.

8. Internal structure of basidiocarp in Agaricus.
9. Explain the structure of Gill in Agaricus.
10. Life cycle of Cercospora.
11. Symptoms of Tikka disease.
12. Symptoms of Early blight.
13. Tobacco mosaic virus.
14. Symptoms of citrus canker disease.
15. General character of Slime molds.
16. Mycorrhiza.
17. Mushroom cultivation.
18. Wart disease of Potato.
19. Write a note on Lichen.
20. Control measures of fungal disease.
21. Name the causal organism of flowing disease
    a. Late blight of potato
    b. White rust of crucifer
    c. Loose smut of wheat.
    d. Early blight of potato.
    e. Tikka disease of ground nut.
22. Write in detail about the causal organism of disease citrus canker.
23. Practice all the diagrams.

**MCQ**

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

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
(iii) epixylic (iv) epigean

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

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) Ian 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

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) chlamydospore (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.