**MSc. Microbiology And Bioinformatics**

**Ist Semester**

**MB-103**

**VIROLOGY, MYCOLOGY & PHYCOLOGY**

**Very short answer questions : -**

1. Give one important disease caused by viroids.
2. Give one important disease caused by prions.
3. Give full name of IFA.
4. Give full name of ELISA.
5. Give full name of RIA.
6. Which virus can be grown in allantoic membrane?
7. Which virus can be grown in chorio-allantoic membrane?
8. Give full name of Pfu.
9. Name the dye used in IFA.
10. Name the enzyme used in ELISA.
11. Define Media.
12. Name two important media used for the growth of fungi.
13. Name the organism responsible for Aflatoxin production.
14. Name the organism responsible for Ochratoxin production.
15. Name the organism responsible for Roquefortine.
16. Name the toxic metabolites produced by Amantiaphalloides.
17. Name for toxic mushroom.
18. Name for edible mushroom.
19. Name two fungi producing antibiotics.
20. Name two fungi producing organic acid.
21. Give full name of VAM.
22. Which enzyme is produced by fusarium?
23. Name one plant disease caused by fusarium.
24. Which hormone is produced by curvularia?
25. Draw the diagram of spore of curvularia.
26. Draw the diagram of spore of Alternaria.
27. Draw the diagram of spore of Helminthosporium.
28. Name the plant disease caused by Helminthosporium.
29. Define lichens. Give examples.
30. Define foliose lichens. Give example.
31. Name few storage products in algae.
32. Give few example of Chlorophyta.
33. Give few example of Phaeophyata.
34. Give few example of Rhodophyta.
35. Name one disease caused by Chlorophyta.
36. Define antheridia.
37. Defi ne oogonia.
38. What is the stored food in red algae?
39. Name few genus producing agar.
40. What is the stored food in Phaeophyata?
41. Who gave the concept of overlapping gene.
42. Who crystallized the virus first?
43. Give two examples of enveloped viruses.

**Short Answer Question:-**

1. Define virion.
2. Define capsid.
3. Define capsomer.
4. Define heamagglutination.
5. Define complement fixation.
6. Describe the properties of virus.
7. Define PFU.
8. Define cytopathic effect.
9. Give the important properties of prion.
10. Give the important properties of viroids.
11. Give few nutritional values of mushroom.
12. Why it is good to consume mushroom?
13. How does fungi acquire its food?
14. Name the variety of spores found in fungi.
15. Give the main features of cellular organization of fungi.
16. Give the main features of cellular organization of yeast.
17. Describe YM shift.
18. Describe mycoses. Give few example.
19. Describe the metabolism in fungi.
20. What is the importance of Rhizoids in fungi?
21. Define mutualism.
22. Define commensalism.
23. Define synergysm.
24. Define symbiosis.
25. Define Antagonism.
26. What are the characteristics of Deuteromycetes?
27. What are the characteristics of Moniliales?
28. What are the characteristics of Demateaceae?
29. What are the characteristics of Mucorales?
30. Define phycoplanktons.
31. Define Benthic algae.
32. Name the pigments found in Chlorophyata.
33. Name the pigments found in Phaeophyta.
34. Name the pigments found in Rhodophyta.
35. Name the organism producing Agar.
36. Define zoospores.
37. Define Aplanospores.
38. What is the importance of heterocyst in Nostoc.
39. What is the role of pyrenoid in algae?
40. What are chemoheterotrophic algae?
41. Give few properties of plant viruses.
42. Define overlapping genes.
43. Name two insects that transmits plant viruses.

**Long Answer Question:-**

1. Describe in detail the ultrastructure of viruses.
2. Describe in detail the ultrastructure of prion.
3. Describe in detail the ultrastructure of viroid.
4. Describe in detail the cultivation of viruses in embryonated egg.
5. Describe in detail the important serological methods for detection of viruses.
6. Describe in detail the cultivation of viruses in cell culture.
7. How bacteriophages can be is isolated and detected.
8. Describe in detail Immunofluroscence Assay.
9. Describe in detail Radio Immuno Assay.
10. Describe in detail ELISA.
11. Describe in detail Asexual reproduction in fungi.
12. Describe in detail Sexual reproduction in fungi.
13. Describe in detail Fungal culture media its preparation.
14. Describe in detail Advantages and Disadvantages of mushroom.
15. Describe in detail Mycotoxins and their properties.
16. Describe in detail economic aspects of fungi.
17. Describe in details structure and organization of fungi.
18. Describe in detail the structure, types and importance of spores.
19. Describe in detail nutrition and metabolism in fungi.
20. Describe the broad varities of fungi.
21. Describe in detail classification types and importance of lichens.
22. Describe in detail classification types and importance of mycorhiza.
23. Describe in detail classification types and importance of lichens.
24. Describe in detail classification types and importance of myxomycetes.
25. Describe in detail classification types and importance of basidiomycetes.
26. Describe in detail importance of imperfect fungi.
27. Describe in detail classification importance of fusarium.
28. Describe in detail classification importance of alternaria.
29. Describe in detail classification importance of curvularia.
30. Describe in detail classification importance of microsporium.
31. Describe in detail the thallus organisation in algae.
32. Describe in detail Algal ecology.
33. Describe in detail the structure, ecology and importance of Chlorophyata.
34. Describe in detail the structure, ecology and importance of Phaeophyta.
35. Describe in detail the structure, ecology and importance of Rhodophyta.
36. Describe in detail the asexual reproduction in algae.
37. Describe in detail the sexual reproduction in algae.
38. Draw well labelled diagram of Alagal bodies.
39. Describe in detail the structure of TMV.
40. Describe in detail the structure of CMV.
41. Describe in detail the structure of Bacteriophage.
42. Describe in detail lytic & lysogenic cycle.
43. Describe in detail the mode of transmission of plant virus.
44. Describe in detail the structure & cycle of HIV.
45. Describe in detail the structure & cycle of Herpes virus.