

# B.SC. PART I SEM I

## BOTANY

### PAPER I

#### PHYCOLOGY AND MICROBIOLOGY

#### MCQ:

1. Rod shaped bacteria are called.....
  - a. Vibrios
  - b. Spirillum
  - c. Bacillus
  - d. Coccus
2. F-factor is present in.....
  - a. Male bacterium
  - b. Algae
  - c. Fungi
  - d. Female bacterium
3. Rhizobium is..... Fixing bacterium
  - a. Hydrogen
  - b. Nitrogen
  - c. Carbon
  - d. Potassium
4. ....is a biofertilizer
  - a. Spirogyra
  - b. Ricca
  - c. Rhizobium
  - d. Petris
5. Coccus bacteria are.....
  - a. Rectangular
  - b. Spherical
  - c. Rod
  - d. Spiral
6. Nucleoid is present in.....
  - a. Fungi
  - b. Algae
  - c. Bryophytes
  - d. Bacteria
7. Extra chromosomal DNA in bacterial is called.....
  - a. Plasmid
  - b. Plastid
  - c. Nucleus
  - d. Chloroplastid
8. Capsid of virus is made up of subunits known as.....

- a. Isomer
  - b. Capsomeres
  - c. Tetramers
  - d. Pentamers
9. Hexagonal capsomeres are made up of .....
- a. 4 monomers
  - b. 5 monomers
  - c. 6 monomers
  - d. 7 monomers
10. Helical symmetry is observed in.....
- a. Tobacco mosaic virus
  - b. T4 phage
  - c. Rhabdovirus
  - d. HIV
11. T4 bacteriophage shows ..... type of symmetry
- a. Helical
  - b. Complex
  - c. Simple
  - d. Spiral
12. ....(1844), First time reported occurrence of heterocyst in blue-green algae.
- a. Thuret
  - b. Paracelsus
  - c. Linnaeus
  - d. Darwin
13. ....is the rhizopodial form of alga
- a. Phacotus
  - b. Gleocapsa
  - c. Chrysamoeba
  - d. Chlorella
14. ....are aggregated form of alga
- a. Palmelloid
  - b. Dendroid
  - c. Rhizopodial
  - d. All of the above
15. False branching is found in .....
- a. Scytonema
  - b. Ectocarpus
  - c. Cladophora
  - d. Batrachospermum
16. .... are living in rock fissures.
- a. Hypolithic
  - b. Chasmolithic
  - c. Endolithic
  - d. Epidaphic
17. .... Is known as pond silk
- a. Oedogonium

- b. Oscillatoria
  - c. Sargassum
  - d. Spirogyra
18. The shape of chloroplasts in spirogyra is.....
- a. Club shaped
  - b. Discoid
  - c. Ribbon shaped with spirally twisted
  - d. Reticulate
19. Zygosporangium of spirogyra is ..... Layered
- a. One
  - b. Three
  - c. Eight
  - d. Five
20. Nostoc is commonly called as.....
- a. Star butter
  - b. Star light
  - c. Star jelly
  - d. Star fish
21. Tinsel flagellum has.....surface
- a. Rough
  - b. Hairy
  - c. Smooth
  - d. All of the above
22. G. M. Smith (1955), divided algae into.....classes
- a. Nine
  - b. Four
  - c. Seven
  - d. Ten
23. Spirogyra is commonly called as.....
- a. Pond gold
  - b. Pond worm
  - c. Pond threads
  - d. Pond silk

### Long questions:

1. Describe thallus structure of Nostoc
2. Describe reproduction in Nostoc
3. Describe thallus structure of Spirogyra
4. Describe alternation of generation in spirogyra
5. Describe diversity of alga with respect to habit
6. Describe economic important of alga
7. Describe diversity of alga with respect to habitat
8. Write discovery and general characters of viruses
9. Describe structure of virus with helical, isohedral and complex form
10. Describe types of viruses. Give an account of T4 bacteriophage
11. Describe RNA viruses TMV

12. Define virus. Add a note on economic important of viruses
13. Describe general characteristic of bacteria
14. Describe structure of bacterial cell
15. Give an account of classification of bacteria based on shape
16. Describe the process of bacterial conjugation
17. Describe economic important of bacteria
18. Describe vegetative and asexual reproduction in bacteria

## **Short Notes:**

1. Nostoc colony
2. Algae of remarkable habitats
3. Aquatic algae
4. Terrestrial algae
5. Unicellular algae
6. Filamentous algae
7. Multicellular algae
8. Structure spirogyra filament
9. General characters of Cyanophyceae
10. General characters of Rhodophycaceae
11. General characters of Phaeophyceae
12. General characters of Chlorophyceae
13. Positive economic importance of algae
14. Negative economic importance of algae
15. Asexual methods of reproduction in Spirogyra
16. Cell structure of nostoc
17. Cell structure of spirogyra
18. Hormogonia in Nostoc
19. Heterocyst as a reproductive structure
20. Structure of heterocyst
21. Scalariform conjugation
22. Lateral conjugation
23. Diversity with respect to habit
24. Diversity with respect to habitat
25. Discovery of viruses
26. General characteristics of viruses
27. Helical virus
28. Icosahedral virus
29. Complex virus
30. T4 phages
31. RNA virus TMV
32. Positive economic importance of viruses
33. Negative economic importance of viruses
34. Cryptogram of T4 bacteriophage
35. Cryptogram of TMV

36. Asexual reproduction in bacteria
37. Vegetative reproduction in bacteria
38. Binary fission in bacteria
39. Types of bacteria based on shape
40. Economic importance of bacteria
41. Bacterial conjugation
42. Bacterial cell structure
43. Discovery of bacteria