

Reg. No. :

Name :

Third Semester B.Sc. Degree Examination, January 2023.

First Degree Programme under CBCSS

Botany

Core Course

**BO 1341 – MICROBIOLOGY, PHYCOLOGY, MYCOLOGY, LICHENOLOGY
AND PLANT PATHOLOGY**

(2019 Admission onwards)

Time : 3 Hours

Max. Marks : 80

SECTION – A

Answer all questions in a word, one or two sentences. Each question carries 1 mark

1. Define atrichous
2. A beneficial bacteria
3. Episomes
4. What is Carragenin?
5. Name the organism causing red tide.
6. Black mould
7. Name a plant with persistent calyx
8. Botanical name of Jack fruit
9. Phytoalexins
10. Bordeaux mixture

(10 × 1 = 10 Marks)

P.T.O.

SECTION – B

Answer **eight** of the following. Each question carries **2** marks.

11. Give the composition of bacterial cell wall.
12. What are bacteriophages?
13. Name the pigments in Cyanophyceae.
14. What are Pyrenoids?
15. What are Synzoospores?
16. What is Frustule?
17. Plaque.
18. Cystocarp of *Gracilaria*
19. Unique feature of fungal cell wall.
20. Which fungus is known as Dead Man's Fingers and why?
21. What are fairy rings?
22. What are Fungi Imperfecti?
23. What are the symptoms of Leaf Mosaic Disease of Tobacco?
24. Name the organisms causing Citrus canker and the disease symptoms.
25. Explain briefly types of flagellum of bacteria.
26. Give an account of bacterial staining.

(8 × 2 = 16 Marks)

SECTION – C

Answer **any six** of the following questions. Each question carries **4** marks.

27. Comment on soil microbes.
28. Describe spoilage of food.
29. Briefly explain waste water treatment technique.
30. Describe dwarf males.

31. Give an account of salient features of Phaeophyceae
32. Describe the life cycle of *Polysiphonia*.
33. Economic importance of algae.
34. Briefly explain the structure of *Saccaromyces*.
35. Explain the morphology and reproduction *Agaricus*.
36. Which are the different types of lichens based on growth? Explain.
37. What are the symptoms and control measures taken for Root wilt of coconut.
38. Comment on host-parasite interaction.

(6 × 4 = 24 Marks)

SECTION – D

Write an essay on **any two** of the following. Each question carries **15** marks.

39. Describe the reproduction and spore formation in bacteria.
40. Describe the classification of algae based on Fritsch.
41. Explain Sexual reproduction methods in *Chara*.
42. Discuss the economic importance of fungi with examples.
43. Describe in detail the life cycle of *Puccinia*.
44. Briefly explain the fungicides prescribed in syllabus.

(2 × 15 = 30 Marks)

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Botany

Complementary Course

**BO 1331 : SYSTEMATIC BOTANY, ECONOMIC BOTANY, ETHNOBOTANY,
PLANT BREEDING**

(2019 Admission Onwards)

Time : 3 Hours

Max. Marks : 80

- I. Answer **all** questions in a word, **one** or **two** sentences. Each question carries **1** mark.
1. Name a plant with dichasial cymose inflorescence.
 2. Define corymb inflorescence.
 3. Fruit of Annonaceae.
 4. Gland dotted leaves are a characteristic feature of which family?
 5. Name a plant with persistent calyx.
 6. Botanical name of Jack fruit.
 7. Scientific name of plant producing cotton fiber.
 8. Name the medicinally important alkaloid in Neem.
 9. Heterosis.
 10. Expand ICAR.

(10 × 1 = 10 Marks)

P.T.O.

II. Answer any **eight** of the following. Each question carries **2** marks.

11. What is the significance of plant taxonomy?
12. What is natural system of classification in plant taxonomy. Who proposed it?
13. Give an account of androecium in Malvaceae.
14. What is Quinquincial aestivation? In which family shows this aestivation?
15. Comment on catkin inflorescence.
16. Give an account of fruits in Rutaceae.
17. What is marginal placentation? Give an example.
18. Write an account gynoecium in Apocyanaceae.
19. Comment on corymbium inflorescence.
20. Give the botanical name, family, morphology of useful part and use of clove.
21. Name two important alkaloids in *Adathoda ps.*
22. List the importance of *Tricopus zeylanicus*.
23. Explain acclimatization.
24. What is colchipoity? How is it induced?
25. Differentiate between intergeneric and interspecific hybridization.
26. Give a brief account on clonal selection.

(8 × 2 = 16 Marks)

III. Answer any **six** of the following questions.

27. Explain aestivation in flowers.
28. Briefly explain gynostegium and name the family in which it is a characteristic feature.
29. Describe the essential whorl of Fabaceae.
30. Describe monochlamydeous and dichlamydeous flowers.
31. Explain the floral formula of Solanaceae.
32. "Asteraceae is the most successful family in the plant kingdom". Justify this statement.
33. Give the floral diagram of Liliaceae and Poaceae.
34. Briefly explain the medicinal importance of Neem.
35. Give the scientific name of the source plant, family and an account of the morphologically useful part from which we get Asafoetida, Cotton, Pepper and Ragi.
36. Give a brief account on disease resistance breeding in plants.
37. Explain the different types of polyploids produced in plant breeding.
38. Comment on Mutation breeding of plants and its significance.

(6 × 4 = 24 Marks)

IV. Write an essay on any **two** of the following. **Each** question carries **15** marks.

39. Comment on Bentham and Hooker Classification of plants.
40. Explain the various types of placentation in angiosperms.
41. Discuss the characteristics of Solanaceae family.

42. Write the botanical name, family and morphology of useful parts of the plants categories mentioned below.

(a) Cereals

(b) Sugar yielding plant

(c) Tuber yielding

(d) Oil yielding plants

(e) Resin yielding plants

(f) Fiber yielding plant

43. Comment on Polyploidy breeding in plants.

44. Describe in brief pureline selection procedure of plant breeding.

(2 × 15 = 30 Marks)