

## LIKELY SYLLABUS QUESTIONS FOR SPECIAL BOTANY GENERIC EXAM --- SEMESTER-1

1. Discuss the characteristics of Algae belonging to groups: Cyanophyta and Phaeophyta. Give suitable examples and incorporate diagrams.
2. Differentiate between Lytic and Lysogenic Cycle in Viruses. Incorporate diagrams in support for your answers.
3. Describe the features of Chlorophyta and Rhodophyta.
4. Briefly describe the different types of spores found in *Puccinia* on Wheat.
5. Discuss about the spores in *Puccinia* found in Barberry Tree.
6. Write an Essay on "Two's a Company, Three's a Lichen?"
7. Write Short notes on:
  - a. Carposporophyte
  - b. Hormogonia
8. With the help of an example, explain "Alteration of Generation in Gymnosperms."
9. With the help of suitable diagrams differentiate between Male and Female cone of *Pinus*.
10. Write a note on "Strobilus of *Equisetum*."
11. Discuss the Morphology of *Marchantia*.
12. Draw a well labelled diagram of *Funaria* capsule.
13. What are archegoniates? Discuss its role in Alteration of Generations.
14. Write a discussion on "Strobilus of *Selaginella*."
15. Write a note on "Conceptacle of *Fucus*"
16. Write the general characteristics of Fungi.
17. Draw a well labelled diagram of "Basidiocarp of *Agaricus*". Write a short on economic importance of Fungi.
18. Write an essay on "Mycorrhiza and its significance"
19. Draw a well labelled diagram of "*Nostoc*" and write a note on its significance.
20. Justify the statement ----"Understanding of Lower Plants is imperative in order to understand the Biodiversity"

LIKELY SYLLABUS QUESTIONS FOR SPECIAL BOTANY GENERIC EXAM --- SEMESTER-2

1. With the help of a suitable diagram explain "Soil Profile."
2. Write a note on "Shelford Law of Tolerance."
3. Write a note on ---- "Carbon Cycle."
4. Write a note on ---- "Nitrogen Cycle."
5. Write a note on ---- "Phosphorous Cycle."
6. What is a Herbarium? What is its role. Mention at least two important Herbarium in India
7. Write a discussion on "Typification."
8. Write the characteristic features of Family "Euphorbiaceae."
9. What are merits and demerits of Bentham and Hooker System of Classification? Where was it published?
10. What is a flora? How is a Monograph different from a Flora? Give an example of Indian Flora and a Monograph.
11. Discuss any 3 Biogeographical Zones of India.
12. Describe succession with the help of Hydrosere.
13. Discuss on the topic --- "Author Citation."
14. Write the taxonomical features of Family Lamiaceae.
15. Write an essay on "Food Chain and Food Web."
16. Write an essay on "Adaptations in Hydrophytes."
17. Discuss the Adaptations in Xerophytes.
18. Describe "Ecotone and Edge Effect."
19. With the help of an example, describe the characteristics feature of Family Apocynaceae.
20. Explain the theories related to Endemism.

LIKELY SYLLABUS QUESTIONS FOR SPECIAL BOTANY GENERIC EXAM --- SEMESTER-3

1. With the help of diagram describe the different types of Ovule.
2. Write a note on "Double Fertilization"
3. Differentiate between Heartwood and Sapwood.
4. Describe the anatomical features of a Monocot leaf using a well labelled diagram.
5. Describe the anatomical features of a Dicot leaf using a well labelled diagram.
6. Describe the anatomical features of a Dicot Stem using a well labelled diagram
7. Describe the anatomical features of a Monocot stem using a well labelled diagram
8. Discuss the secondary anomalous growth in *Boerhaavia*.
9. What are Meristems? Briefly describe the different types of meristems.
10. Give an account of different types of Simple Tissues.
11. Draw a well labelled diagram of Phloem and describe the role of the cells involved in it.
12. Write an essay on --- "Pollination Mechanisms in Angiosperms."
13. Explain the anatomical adaptations in Hydrophyte by using a well labelled diagram of *Hydrilla* in support of your answer.
14. What is an endosperm? What are its types? What is the function of Endosperm?
15. Write a note on "Polyembryony."
16. Write an essay on Apomixis. Give a suitable title for your essay.
17. Justify the statement "Trees would not exist with Cambium."
18. Describe the different types of Stomata.
19. What is a seed? Give a brief account on the topic --- Seed Dispersal.
20. Draw a well labelled diagram of a mature anther.

LIKELY SYLLABUS QUESTIONS FOR SPECIAL BOTANY GENERIC EXAM --- SEMESTER-4

1. Write a note on "Biological Nitrogen Fixation"
2. Write down the steps involved in Glycolysis.
3. Describe the Girdling Experiment.
4. Write a note on Vernalization
5. Explain "Kranz Anatomy."
6. What are enzymes? What are its characteristics and its function.
7. Explain two methods of Enzyme inhibition.
8. What are Hydathodes? what is its role?
9. Describe Z-scheme in Light Reaction.
10. How do C4 plants protect themselves from photorespiration?
11. Describe the C2 cycle? what is it called otherwise?
12. Using a flowchart explain Kreb's Cycle.
13. Explain the role of Sink in Phloem Loading and Unloading.
14. Write the 2 functions of any 5 macro-nutrients.
15. What is transpiration? What are factors affecting it?
16. Write a note on Phytochrome.
17. what do you understand by Short Day Plants and Long Day Plants?
18. Write a short note on: a. Auxin b. ABA
19. Write a short note on: a. Gibberellins b. Ethylene
20. Draw a well labelled diagram of Stoma. Describe the mechanism involved in opening and closing of stomata.