

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086
(For candidates admitted from the academic year 2019 – 2020 & thereafter)
SUBJECT CODE: 19BT/AC/GB24

B.Sc. DEGREE EXAMINATION, APRIL 2023
BRANCH V(A) – PLANT BIOLOGY AND PLANT BIOTECHNOLOGY
SECOND SEMESTER

COURSE : ALLIED CORE
PAPER : GENERAL BOTANY - II
TIME : 3 HOURS **MAX. MARKS: 100**

SECTION –A

ANSWER ALL QUESTIONS:

I Choose the correct answer: **(5 x 1 = 5)**

1. Lycopodium is commonly known as _____ .
a) Ground pines b) Club mosss c) Cord moss d) None of the above
2. The mechanical tissue found in the primary structure of dicot stem is _____.
a) Chlorenchyma b) Parenchyma c) Sclerenchyma d) Collenchyma
3. _____ is the site of dark reaction of photosynthesis .
a) Stroma b) Grana c) Thylakoids d) Stromal lamellae
4. The hormone that stimulates root initiation is _____.
a) Auxins b) Gibberellins c) Cytokinensis d) ABA
5. _____ is a vegetative method of plant propagation
a) Gootee b) Flowering c) Seeding d) None of the above

II. Fill in the blanks: **(5 x 1 = 5)**

6. A specialized multicellular asexual reproducing bodies borne in small cup like structures are known as _____.
7. In monocot root, the xylem is _____ in condition.
8. The macronutrient that is a vital constituent of vitamins, nucleic acids, proteins is _____.
9. The plant regulator that take part in natural process of breaking seed dormancy is _____.
10. The bonsai is the _____ art of growing and training miniature trees in containers.

III. State whether the following sentences are True or False **(3x 1 = 3)**

11. Pteridophytes are generally called as vascular crytogams.
12. The vascular bundles are scattered in monocot stem.
13. Ethylene is widely used as a fruit ripening and for flower production.

IV. Match the following: **(5 x 1 = 5)**

- | | | |
|-------------------------|---|-----------------------------------|
| 14. Corolloid root | - | i) bulliform cells |
| 15. Isobilateral leaf | - | ii) low temperature |
| 16. Photophoshorylation | - | iii) filaments of <i>Anabaena</i> |
| 17. Vernalization | - | iv) good longevity |
| 18. Cut flowers | - | v) ATP synthesis |

V. Answer any SIX of the following.**(6 x 3 = 18)****Each answer not to exceed 50 words:**

19. What is dimorphic leaves?
20. Write about different steles in *Lycopodium*.
21. Explain the structure of stomata.
22. What is photolysis?
23. Classify the mineral nutrition in plants.
24. Define Photoperiodism.
25. List the significance of Vernalisation.
26. Describe the structure of gametophore in *Funaria*.
27. State any three important salient features of Bryophyta.

SECTION – B**ANSWER ANY FOUR OF THE FOLLOWING IN NOT MORE THAN 200 WORDS.
DRAW DIAGRAMS WHEREVER NECESSARY.****(4 x 6 = 24)**

28. Enumerate the salient feature of Pteridophytes.
29. Draw and describe the structure of dorsiventral leaf.
30. Discuss the role of macronutrients in plants.
31. Explain the process of Vernalisation in plants.
32. What are cut flowers? Describe any one method of prolonging the vase life.
33. Describe the primary structure of dicot stem.

SECTION – C**ANSWER ANY TWO OF THE FOLLOWING IN NOT MORE THAN 1000 WORDS.
DRAW DIAGRAMS WHEREVER NECESSARY.****(2 x 20 = 40)**

34. Illustrate the structure and life cycle of *Cycas*.
35. Explain the mechanism of Light reaction in detail.
36. What are Plant regulators? Discuss the practical applications of Auxins and Gibberellins.
37. Define Vegetative Propagation. Describe the various methods of plant propagation.
