

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086
(For candidates admitted from the academic year 2011 – 12 & thereafter)

SUBJECT CODE: 11BT/AC/GB23

B. Sc. DEGREE EXAMINATION, APRIL 2015
BRANCH VI(A) – ADVANCED ZOOLOGY AND 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)

- Light reaction occurs in
a) grana b) stroma c) thylakoids d) mitochondria
- Who is the father of plant tissue culture?
a) Skoog b) White c) Haberlandt d) Hannig
- Photosynthesis is maximum in
a) Blue light b) Red light c) Blue and green light d) Blue and red light
- Which of the following elements is important in photolysis of water?
a) Fe b) Mn c) Zn d) Mg
- Cycas* leaves are usually
a) Palmately compound b) Pinnately compound c) Simple d) Solitary

II. FILL IN THE BLANKS: (5 x 1 = 5)

- C4 plants have _____ type of anatomy in their leaves.
- The juvenile gametophytic stage of *Funaria* is called as a _____.
- Sexual reproduction in *Funaria* is of highly advanced _____ type.
- The final stage of tissue culture where the new plants are taken out for cultivation to the field is termed as _____.
- Liverworts are closely related to _____.

III. STATE WHETHER TRUE OR FALSE: (4 x 1 = 4)

- Cycas* is a living fossil.
- In *Adiantum*, 3 types of stele are found at various levels on the stem.
- ABA is responsible for stomata opening.
- Pleurotus ostreatus* is otherwise known as button mushroom.

IV. MATCH THE FOLLOWING**(4 x 1 = 4)**

- | | |
|-----------------|------------------|
| 15. Auxin | Fruit ripening |
| 16. Gibberellin | Apical dominance |
| 17. Cytokinin | Stem elongation |
| 18. Ethylene | Cell division |

IV. ANSWER ANY SIX, EACH ANSWER SHOULD NOT EXCEED 50 WORDS**(6 x 3 =18)**

19. Oxidative phosphorylation
20. Ikebana
21. Micropropagation
22. Red drop
23. Etiolation
24. Protoplast
25. Somatic embryogenesis
26. Callus
27. Anaerobic fermentation

SECTION – B**ANSWER ANY FOUR IN 200 WORDS. DRAW DIAGRAMS WHEREVER NECESSARY****(4 x 6=24)**

28. Describe the essential components of tissue culture media.
29. Enumerate upon the steps involved in glycolysis.
30. Explain the art of Bonsai culture.
31. Highlight the differences between Bryophytes and Pteridophytes.
32. Elaborate upon the technique of oyster mushroom cultivation.
33. Differentiate between cyclic and non-cyclic photophosphorylation.

SECTION – C**ANSWER ANY TWO QUESTIONS IN 1000 WORDS. DRAW DIAGRAMS WHEREVER NECESSARY****(2 x 20=40)**

34. Describe Calvin cycle with reference to structure, biochemical reactions and efficiency.
35. What are the basic requirements to set up a Tissue culture lab?
36. Enumerate upon the life cycle of *Cycas*.
37. Write an essay bringing out the importance of plant growth hormones.
