

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086
(For candidates admitted from the academic year 2015 – 2016 & thereafter)

SUBJECT CODE: 15BT/AC/GB24

B. Sc. DEGREE EXAMINATION, APRIL 2017
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)

- In Cycas, ovules are naked and are borne on the -----
(a) megasporangia (b) megasporophyll (c) female cone (d) microsporophyll
- Ribulose 1,5 – biphosphate is the CO₂ acceptor of
(a) C – 3 plants (b) C – 4 plants (c) C – 3 & C- 4 plants (d) light reaction
- The effect of kinetin in delaying the senescence is called as .
(a) Richmond-lang effect (b) aerobic process (c) ripening (d) dormancy
- Tree species used for Bonsai culture
(a) *Ficus religiosa* (b) *Pelargonium* (c) *Begonia* (d) *Clerodendron*
- Regeneration of plantlets in cultured tissue has been achieved through
(a) biotranformation (b) micropropagation (c) cell lines (d) none

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

- Each ring of peristome in the sporogonium of Funaria consists of ----- teeth.
- For the fixation of 6CO₂ molecules into one hexose sugar molecule through Calvin cycle 12 NADPH₂ AND ----- ATPs are required.
- Acceleration of the ability to flower by a chilling treatment is known as -----
- In dry flower arrangement, if the line shows adjacent colours of light and dark bands it is known as ----- combination.
- is a fungal growth medium impregnated with mycelial fragments of mushroom which serves as inoculum for mushroom cultivation.

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

- A protostele with a pith is called siphonostele.
- The application of ABA to leaves of normal plants causes opening of stomata.
- Sucrose solution facilitates the opening of the buds.
- The first stable product in C₄ pathway is oxalo acetic acid.

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

- | | | |
|---------------------|---|------------------|
| 15. <i>Adiantum</i> | - | Japanese style |
| 16. Kranz anatomy | - | Maiden hair fern |
| 17. Bolting | - | Bundle sheath |
| 18. Ikebana | - | Gibberellin |

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

19. Vascular cryptogams
20. Archegonium in *Funaria*
21. Red drop phenomenon
22. Anaerobic fermentation
23. Short day plants
24. Applications of Ethylene
25. Importance of cut flowers
26. Callus
27. *Pleurotus*

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

28. Write a short note on microsporophyll of *Cycas*.
29. Write about cyclic photophosphorylation.
30. Discuss about the practical applications of auxins.
31. Write about fresh flower arrangement.
32. Write briefly about plant tissue culture.
33. Draw and explain the structure of *Funaria* capsule.

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

34. Describe the life cycle of *Adiantum*.
35. Explain glycolysis and Krebs's cycle.
36. Describe in detail about Bonsai.
37. Write an essay on cultivation of Oyster mushroom.
