



**2022/TDC(CBCS)/EVEN/SEM/
BTCHCC-202T/311**

TDC (CBCS) Even Semester Exam., 2022

BIOTECHNOLOGY

(Honours)

(2nd Semester)

Course No. : BTCHCC-202T

(Plant Physiology)

Full Marks : 50

Pass Marks : 20

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

SECTION—A

Answer any ten questions :

2×10=20

1. What is meristem?
2. Who proposed tunica corpus theory and in which year?
3. What is quiescent center?
4. What is secondary vascular bundle?



(2)

(3)

5. What are guard cells? Write their function.
6. Define transpiration pull.
7. What are macronutrients? Give one example.
8. What is chlorosis? Which element is responsible for it?
9. Write the deficiency symptoms of N and Fe in plants.
10. What is photolysis?
11. Name the first stable products in C_3 and C_4 plants.
12. Write the functions of nitrogenase enzyme.
13. Write a note on photoperiodism.
14. What is growth curve? What is the shape of growth curve in plant?
15. Write a note on vernalization.

SECTION—B

Answer any five questions : $6 \times 5 = 30$

16. Describe the theories regarding shoot apical meristems in plants.

17. Describe the secondary growth in thickness in dicot stem.
18. Differentiate between diffusion and osmosis. How does plasmolysis occur? What is the importance of plasmolysis? $2+2+2=6$
19. Describe the mechanism of opening and closing of stomata in detail.
20. Give a detailed account of mechanism of food transport in plants.
21. Differentiate between macro- and micro-elements. Write the importance of four macro-elements in plants. $2+4=6$
22. What is C_2 cycle? Write the reactions of photorespiration. $2+4=6$
23. Write notes on the following : $3 \times 2 = 6$
 - (a) Assimilation of ammonium
 - (b) CAM plants
24. Discuss the physiological role and mode of action of auxins in plants. Name two synthetic auxins. $5+1=6$
25. What is seed dormancy? Describe the methods of breaking seed dormancy. $2+4=6$
