2023/TDC(CBCS)/EVEN/SEM/
BTCHCC-202T/281

TDC (CBCS) Even Semester Exam., 2023

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 secondary growth?

2. Define growth rings.

3. Differentiate between the leaf anatomy of monocots and dicots.

4. What is imbibition?

J23/532   (Turn Over)

(2)

5. What is endosmosis?

6. What are guard cells? Write their function.

7. What do you mean by micronutrients? Give one example.

8. Name two symptoms of deficiency of nutrients in plants.

9. What are essential trace elements?

10. What is the first stable product in C_4 plants?

11. What are thylakoids?

12. Define photolysis.

13. Write a note on seed dormancy.

14. What are different factors that affect seed germination?

15. What is growth curve?

SECTION—B

Answer any *five* questions :   6×5=30

16. Describe the theories regarding shoot apical meristem. Add a note on the function of roots.   4+2=6

(3)

17. What are the different permanent tissues found in plants? Describe them briefly.   2+4=6

18. What is stomata? Describe the mechanism of opening and closing of stomata.   1+5=6

19. Differentiate between transpiration and guttation. Describe how plants absorb water from soil.   2+4=6

20. Give a detailed account of mechanism of food transport in plants.   6

21. What are the criteria for identification of essentiality of nutrients? Differentiate between micro- and macro-nutrients. Add a note on hydroponics.   2+2+2=6

22. Write notes on the following :   3×2=6

    (a) Cyclic photophosphorylation

    (b) Photorespiration

23. Describe the process of Calvin cycle. Add a note on compensation point.   5+1=6

24. Write a note on photoperiodism. Add a note on vernalization.   3+3=6

25. Write a short note on abscisic acid and ethylene.   3+3=6

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