2023/TDC(CBCS)/EVEN/SEM/
BOTHCC–601T/230

TDC (CBCS) Even Semester Exam., 2023

BOTANY

(Honours)

(6th Semester)

Course No. : BOTHCC–601T

(Plant Metabolism)

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* of the following questions : 2×10=20

1. Write about allosteric regulation.

2. Differentiate between anabolism and catabolism.

(Turn Over)

(2)

3. Write a note on regulation of metabolism.

4. Define photochemical reactions.

5. Differentiate between PS–I and PS–II.

6. What is C_2 cycle?

7. Write a note on anaplerotic reactions.

8. Write about the fate of pyruvate.

9. What is pentose phosphate pathway?

10. Write a note on second messenger concept.

11. Give a brief account of Racker's experiment.

12. Write about ATP synthase.

13. Write a note on α-oxidation.

14. Give a brief account of glyoxylate cycle.

15. Define nitrate assimilation.

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(3)

SECTION—B

Answer any *five* of the following questions :

$6 \times 5 = 30$

16. Write notes on the following: $3+3=6$

    (a) Covalent modulation

    (b) Catabolic pathways

17. Give a detailed account of isoenzymes.

18. Give an illustrated account of role of various photosynthetic pigments.

19. Give a short account of CAM cycle. Differentiate between C_3 and C_4 plants.

20. Write notes on the following : $3+3=6$

    (a) NADH shuttle

    (b) Cyanide resistant respiration

21. Give an account of glycolysis with schematic representation.

22. Give a detailed account of receptor-ligand interaction.

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23. Write notes on the following :   3+3=6

    (a) MAP kinase cascade

    (b) Calcium calmodulin

24. Give an illustrated account of β-oxidation of fatty acid.

25. Write about biological nitrogen fixation.

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