TDC (CBCS) Even Semester Exam., 2022

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. Define enzymes.

2. What is activation energy?

3. Name two accessory pigments.

4. What is the role of antenna molecules?

5. Define photorespiration.

6. What is the full form of CAM?

7. Name the most abundant enzyme in nature.

8. What are the sources of energy for photosynthesis?

9. What are plastids?

10. What is Boyer's conformational model?

11. What are the factors affecting respiration?

12. Define germination.

13. Name two nitrogen fixing organisms.

14. What is the first stable product of Krebs cycle?

15. Define transamination.

SECTION—B

Answer any *five* of the following questions : 6×5=30

16. Write short notes on the following : 3×2=6
   (a) Anabolic pathways
   (b) Metabolic regulation

17. What is the role of regulatory enzyme in plant metabolism?

18. With a neat diagram, discuss C4 cycle.

19. Discuss the electron transport system in photosynthesis.

20. Write notes on the following : 3×2=6
   (a) Oxidative phosphorylation
   (b) Pentose phosphate pathway

21. With schematic representation, discuss Krebs cycle.

22. Discuss in detail the mechanism of ATP synthesis.

23. Write notes on the following : 3×2=6
   (a) Receptor ligand interaction
   (b) Role of uncouplers

24. What do you understand by gluconeogenesis? Discuss the role of gluconeogenesis in lipid mobilization during seed germination.

25. Write a role on biological nitrogen fixation.

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