D 120082 **(Pages : 2)** **Name.....**

Reg. No.....

SIXTH SEMESTER (CBCSS—UG) DEGREE EXAMINATION
MARCH 2025

Botany

BOT 6B 12—PLANT PHYSIOLOGY AND METABOLISM

(Admissions Year—2019 Onwards)

Time : Two Hours Maximum : 60 Marks

Section A

All questions can be answered.
Each question carries 2 *marks.*
Ceiling : 20 *marks.*

1. Give reason about water is a universal solvent.
2. Expand ATP and it's function.
3. What is transpiration ?
4. What is osmotic potential ?
5. What is phototropism ?
6. What are macronutrients ?
7. What is nitrogen assimilation ?
8. What is the process of translocation in phloem ?
9. Define Phloem loading and unloading.
10. What is the role of enzyme ?
11. What is catabolic reaction ?
12. List out the types of plant movement.

Turn over

Section B

All questions can be answered.
Each question carries 5 *marks.*
Ceiling : 30 *marks.*

13. Write the mechanism of guard cell movement.

14. Give an account on Photomorphogenesis and their two important stages.

15. Brief account on Photosynthetic Carbon Reduction cycle (PCR).

16. Ilustrate the Electron transfer reactions in mitochondria.

17. What are the factors affecting photosynthesis.

18. Brief out the importance of TCA Cycle.

19. What are the physiological role of auxins ?

Section C (Essay Type)

Answer any **one** *question, the question carries* 10 *marks.*

20. Explain the two phases of Glycolysis.

21. Give detailed about the various types of biological nitrogen fixation in leguminous plants.

(1 × 10 = 10 marks)

D 100512 **(Pages : 2)** **Name.....**

Reg. No.....

SIXTH SEMESTER U.G. DEGREE EXAMINATION, MARCH 2024

(CBCSS—UG)

Botany

BOT 6B 12—PLANT PHYSIOLOGY AND METABOLISM

(2019 Admission onwards)

Time : Two Hours Maximum : 60 Marks

Section A

Answer **all** *questions.*
Each question carries 2 *marks.*
Ceiling : 20 *Marks.*

1. Define water potential.
2. What is Antitranspirants ?
3. Define ascent of sap.
4. Differentiate simple and facilitated diffusion.
5. Describe the structure of chloroplast.
6. Briefly explain nitrogen assimilation.
7. Differentiate phloem loading and unloading.
8. Define nyctinastic movement.
9. Explain Vernalization.
10. What is Metabolism ?
11. Write a note on electron carriers.
12. Define oxidative phosphorylation.

Turn over

Section B

Answer **all** *questions.*
Each question carries 5 *marks.*
Ceiling : 30 *Marks.*

13. Write an account on mechanism of guard cell movement.

14. Explain the role and deficiency symptoms of micro nutrients in plants.

15. Describe CAM Pathway.

16. Write an account on Light reaction in plants.

17. Explain various types of movements in plants.

18. Describe Citric acid cycle.

19. Explain β Oxidation of fatty acids.

Section C

Answer any **one** *question.*
The question carries 10 *marks.*

20. Explain Biological Nitrogen. Add a note on biosynthesis of amino acids.

21. Describe C3, C4 and CAM cycle in plants.

(1 × 10 = 10 marks)