

19. (a) Write an account on the types and significance of photoperiodism.

Or

- (b) Give an account of the mechanism of action and physiological role of phytochrome.

20. (a) Write an essay on the mechanism of high temperature tolerance.

Or

- (b) Describe the morphological and physiological changes during radiation stress.

Reg. No. :

Code No. : 7205

Sub. Code : C 42 B

M.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2013.

Fourth Semester

Botany

PLANT PHYSIOLOGY

(For those who joined in July 2008 – 2011)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

1. Transpiration.
2. Trace elements.
3. Anoxygenic photosynthesis.
4. RuDP carboxylase.
5. Dark respiration.
6. Glutamine synthetase.
7. Dormancy.
8. Biological clock.



9. Stress endure plants.

10. Frost stress.

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

11. (a) Differentiate chlorosis and etiolation.

Or

(b) Write short note on source, physiological function and deficiency symptoms of Boron.

12. (a) Differentiate cyclic and non cyclic electron transport system.

Or

(b) Write short note on RuBisCO.

13. (a) Write significance of α – oxidation.

Or

(b) Describe the structure and biochemistry of enzyme, nitrogenase.

14. (a) Write short note on seed dormancy.

Or

(b) Explain biosynthesis of auxin briefly.

Page 2 Code No. : 7205

15. (a) Write brief note on osmotic stress.

Or

(b) Write short note on Ca – Calmodulin.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

16. (a) Explain the mechanism of water absorption.

Or

(b) Describe various theories to explain the phenomenon, ascent of sap.

17. (a) Give an account on the biosynthesis of sucrose.

Or

(b) Analyze photorespiration in C_4 and in CAM plants.

18. (a) Write an essay on the mechanism of anaerobic respiration.

Or

(b) Write an essay on the glyoxylate cycle in plants.

Page 3 Code No. : 7205

