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Name.....55

Reg. No.....

SECOND SEMESTER B.Sc. DEGREE EXAMINATION, MAY 2014

(UG—CCSS)

Complementary Course—Botany

BO 2C 02—PLANT PHYSIOLOGY AND ECOLOGY

Time : Three Hours

Maximum : 30 Weightage

Illustrate if necessary.

Part A

Answer all questions.

Choose the correct answer :

1. Water potential of a solution :

- (a) Positive. (b) Negative.
(c) Neutral. (d) Both positive and negative.

2. Phenomenon photoperiodism was first discovered by :

- (a) Garner and Allard. (b) Lysenko.
(c) Charles Darwin. (d) Went.

3. Calvin cycle is also known as :

- (a) EMP pathway. (b) TCA cycle.
(c) C₃ cycle. (d) C₂ cycle.

4. Vivipary is seen in :

- (a) Hydrophytes. (b) Halophytes.
(c) Xerophytes. (d) Epiphytes.

Fill in the blanks :

5. Net gain of ATP in the oxidation of a glucose molecule in glycolysis is _____.
6. Scarification is a technique employed in removing _____ in seeds.
7. Epiphytes absorbs atmospheric moisture through _____.
8. First stable product of C₄ cycle is _____.

Turn over

Answer in one word :

9. Who coined the term mitochondria ?
10. Apparatus used to measure the growth.
11. Succession starts in a virgin land.
12. Who proposed cohesion tension theory ?

(12 × ¼ =

Part B (Short Answer Questions)

Answer all questions.

Each question carries 1 weightage.

13. What are antitranspirants ?
14. What is Emerson effect ?
15. What is absorption spectrum ?
16. What is a short day plant ?
17. What is a sere ?
18. What is diffusion ?
19. What is symplast ?
20. What is senescence ?
21. What is log phase of growth ?

(9 × 1 =

Part C (Paragraph Questions)

Answer any five questions.

Each question carries 2 weightage.

22. Write a note on vernalization.
23. Law of limiting factors.
24. Describe a synthetic hormone.
25. Explain fermentation.
26. Explain K⁺ ion theory of stomatal movement.
27. Write a note on Abscisic acid.
28. Explain passive absorption of water.

(5 × 2 = 1

Part D (Essay Questions.)

Answer any **two** questions.
Each question carries 4 weightage.

29. Give a detailed account of glycolysis.
30. Briefly describe the ecological adaptations of hydrophytes.
31. Explain photophosphorylation.

(2 × 4 = 8 weightage)