C 41826 (Pages 2) Name.....

Reg. No.....

SECOND SEMESTER B.Sc. DEGREE EXAMINATION, APRIL/MAY 2013

(CCSS)

Botany

B02 C02—PLANT PHYSIOLOGY AND ECOLOGY

Time : Three Hours Maximum : 30 Weightage

Illustrate with diagrams if necessary.

Part A

Answer **all** *questions.*

Choose the correct answer :

1. The molecule which absorbs CO_2 from atmosphere in C_4 plants.
   (a) RuBP. (b) PEP.
   (c) PGAI. (d) DHAP.
2. The chief driving force of ascent of sap is :
   (a) root pressure. (b) transpiration pull.
   (c) atmospheric pressure. (d) capillarity force.
3. Which of the following is common in both aerobic and anaerobic respiration ?
   (a) Krebs cycle. (b) Fermentation.
   (c) glycolysis. (d) Calvin cycle.
4. Root system is poorly developed in
   (a) Xerophytes. (b) Epiphytes.
   (c) Mesophytes. (d) Hydrophytes.

Fill in the blanks :

5. Power house of the cell is ———.
6. Rubisco is found in ——— of the chloroplast.
7. Loss of water in the form of vapour from plants is called ———.
8. Movement of molecules from higher concentration to lower concentration is ———,

Answer in one word :

9. Organisms that obtain energy and materials from other organisms.
10. Who first proposed the concept of limiting factors ?

Turn over

11. Name a rootless hydrophyte.
12. Inter relation between food chain.

(12 × ¼ = 3 weightage)

Part B

Short answer questions.
Answer **all** *questions*

13. What is permeability ?
14. What are decomposers ?
15. What is food chain ?
16. What is a predator ?
17. What is turgor pressure ?
18. What is plasmolysis ?
19. What is guttation ?
20. What is substrate level phosphorylation ?
21. What are secondary cosumers ?

(9 × 1 = 9 weightage)

Part C

Paragraph questions.
Answer any **five** *questions*

22. Explain root pressure hypothesis.
23. Active absorption of water.
24. What are advantages of dormancy of seeds ?
25. Explain climatic climax.
26. Describe the morphological adaptations of hydrophytes.
27. Explain cyclic photophosphorylation.
28. Write a note on fate of pyruvic acid.

(5 × 2 = 10 weightage)

Part D

Essay questions.
Answer any **two** *questions.*

29. Trace the path of carbon in C_3 plants.
30. Describe Cohesion Tension theory of ascent of sap.
31. Write an essay on ecosystem.

(2 × 4 = 8 weightage)