C 21602 (Pages : 2) Name.....

Reg. No.....

SIXTH SEMESTER B.Sc. DEGREE (SUPPLEMENTARY/IMPROVEMENT) EXAMINATION, MARCH 2017

(UG–CCSS)

Botany

BO 6B 09 – PLANT PHYSIOLOGY, METABOLISM AND BIOCHEMISTRY

(2012 Admission onwards)

Time : Three Hours Maximum : 30 Weightage

I. Answer *all* questions. Choose the correct answer :

1. Kranz leaf anatomy is shown by :

   (a) CAM plants. (b) C_3 plants.

   (c) C_4 plants. (d) Xerophytes.

2. The reaction centre of PS1 is :

   (a) P 680. (b) P 700.

   (c) P 650. (d) P 800.

3. Multiple forms of enzyme catalyzing the same reaction :

   (a) Abzymes. (b) Isoenzymes.

   (c) Allosteric enzymes. (d) Coenzymes.

4. Name a non-reducing sugar :

   (a) Glucose. (b) Lactose.

   (c) Sucrose. (d) Ribose.

Fill in the blanks :

5. A cell placed in hypertonic solution shows _____.
6. The decrease in photosynthetic yield above 680 nanometer is known as _____.
7. The site of glycolysis in a cell is _____.
8. The repeating unit in a terpene is _____.

Answer in a single word :

9. Name the specialized cells which surrounds the stomata :
10. Name the cold treatment given for seeds or young plants for early flowering :

Turn over

11. Name the alcohol present in triglyceride :
12. Name any *one* pyrimidine nucleotide.

(12 × ¼ = 3 weightage)

II. Answer *all* questions. Short Answers :

13. What are quantasomes?
14. Define seed dormancy.
15. What is meant by diffusion pressure deficit?
16. State law of limiting factors.
17. What are tropic movements?
18. What is meant by RQ?
19. Mention the role of coenzymes in enzymatic reactions.
20. Give any *two* functions of nucleotides.
21. What is glycosidic linkage?

(9 × 1 = 9 weightage)

III. Answer any *five* questions. Short Essays :

22. Briefly explain the light reaction of Photosynthesis.
23. What is phytochrome? Explain its role in flowering.
24. Explain the Munch mass flow hypothesis with the help of a diagram.
25. Comment on the fermentation of root nodules present in leguminous plants.
26. What is oxidative phosphorylation? Explain with a schematic diagram.
27. Explain the structure and function of triglycerides.
28. What are secondary metabolites? Give an account of the different categories of them.

(5 × 2 = 10 weightage)

IV. Answer any *two* questions. Essays :

29. Describe the mechanisms of mineral salt absorption in plants.
30. Explain the important steps of glycolysis.
31. Write an essay on the different structured levels of organization of proteins.

(2 × 4 = 8 weightage)