

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2023
(Sixth Semester)

Branch – BIOCHEMISTRY

PLANT BIOCHEMISTRY

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(10 x 1 = 10)

1. Photosynthetic Pigments absorb _____.
(i) UV radiation (ii) IR radiation
(iii) Visible radiation (iv) Gama radiation
2. The Unit of Photosynthesis _____.
(i) Quantersome (ii) Angstrom
(iii) Geotropism (iv) Phytochrome
3. Photorespiration involves _____.
(i) Glycolate Cycle (ii) Kreb's Cycle
(iii) Calvin Cycle (iv) CAM Cycle
4. Which of the following is the first compound that accepts carbon dioxide during dark phase of photosynthesis?
(i) NADp (ii) RUBp
(iii) Ferridoxin (iv) Cytochrome
5. Nodules for N₂ fixation is present in _____.
(i) Stem (ii) Leaf
(iii) Flower (iv) Root
6. Deficiency of sulphur in plants causes which of the following symptoms?
(i) Sicke leaf disease (ii) Rostle
(iii) Tea yellow disease (iv) Bloosom and root
7. Auxins are used for _____.
(i) Root elongation (ii) Flowering
(iii) Cell elongation (iv) Senescence
8. Which of the following hormone is involved in fruit ripening?
(i) Auxins (ii) Gibberlins
(iii) Cytokinins (iv) Ethylene
9. Senescence is _____.
(i) Seed germination (ii) Fruit formation
(iii) Tumor inducing (iv) Becoming old
10. Phytochrome is a _____ protein.
(i) Growth (ii) Regulation
(iii) Channel protein (iv) Phytoceptor

SECTION - B (35 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks (5 x 7 = 35)

11. a) Describe about Hill's reaction.

OR

b) What in ETC ? Explain briefly?

Cont...

12. a) Describe about CAM.

OR

b) Write on photorespiration.

13. a) Explain non-Symbiotic nitrogen fixation.

OR

b) Write an elaborate on nitrogen cycle.

14. a) Write short notes on cytokinins.

OR

b) Write in brief about the biosynthesis and mode of action of ethylene.

15. a) What is the role of phytochrome in the growth and development of plants.

OR

b) Discuss about Photomorphogenesis .

SECTION - C (30 Marks)

Answer any **THREE** Questions

ALL Questions Carry **EQUAL** Marks

(3 x 10 = 30)

16. What is photosynthetic apparatus and write a note on photosynthetic pigments?

17. Explain about C3 pathway.

18. Discuss the assimilation of sulphur in detail.

19. Discuss the chemistry, biosynthesis, mode of action and practical applications of auxins.

20. Write about the biochemistry of seed germination.

Z-Z-Z

END