

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BSc DEGREE EXAMINATION DECEMBER 2018
(Sixth Semester)

Branch - **BIOCHEMISTRY**

PLANT BIOCHEMISTRY

Time : Three Hours

Maximum : 75 Marks

SECTION-A (20 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** marks (10 x 2 = 20)

- 1 What is oxidative phosphorylation?
- 2 Define photorespiration.
- 3 What are the basic chemical compounds comprising the chlorophyll molecule?
- 4 What does the term C_0_2 fixation mean?
- 5 What is nitrogen fixation?
- 6 Enlist the sources of nitrogen.
- 7 List out the name of natural cytokinins.
- 8 What is the role of auxin in growing plants?
- 9 What is dormancy?
- 10 Give the examples for germination promoters.

SECTION-B (25 Marks)

Answer **ALL** Questions

ALL Questions Carry **EQUAL** Marks (5 x 5 = 25)

- 11 a Write a note on factors affecting photosynthesis.
OR
b Give an account of photosynthetic pigments.
- 12 a • Compare the C_0_2 fixation of C_3 plants with that of C_4 plants.
OR
b Explain the mechanism of photorespiration in C_3 and CAM plants.
- 13 a Explain the symbiotic nitrogen fixation in plants.
OR
b Differentiate between nitrification and denitrification.
- 14 a Explain several possible commercial applications of cytokinins.
OR
b Give account of physiological role of abscisic acid.
- 15 a Discuss the factors affecting the seed germination.
OR
b What is gluconeogenesis? How is fat converted to carbohydrate in plants?

SECTION - C (30 Marks)

Answer any **THREE** Questions

ALL Questions Carry **EQUAL** Marks (3 x 10 = 30)

- 16 Explain the structure and composition of photosynthetic pigments.
- 17 How the plants biosynthesis and degradation the sucrose?
- 18 What is nitrogen cycle? And discuss the human activities affecting nitrogen cycle.
- 19 Describe the biosynthesis and physiological effects of auxin in plants.
- 20 Describe the methods of breaking seed dormancy and its biological significance.