

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BSc DEGREE EXAMINATION MAY 2019
(Sixth Semester)

Branch - **BOTANY**

PLANT METABOLISM

Time : Three Hours

Maximum : 75 Marks

SECTION-A (20 Marks!)

Answer **ALL** questions

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

- 1 Define the term of Entropy.
- 2 Write the main feature of CO-enzyme.
- 3 What are photons?
- 4 What are carotenoids?
- 5 Write short note on Grana.
- 6 What do you mean by Emersons enhancement effect?
- 7 What is meant by Phosphorylation?
- 8 Comment on ATP.
- 9 Comment on Root nodule.
- 10 Write any two sulphur containing amino acid.

SECTION - B (25 Marks)

Answer **ALL** Questions

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

- 11 a Give an account of factors affecting enzyme action.
OR
b Discuss the lock and key theory.
- 12 a Give a brief account on electron transport pathway in chloroplast.
OR
b Write about photosynthetic pigments.
- 13 a Write a brief account on photorespiration.
OR
b Explain the steps involved in Glycolysis.
- 14 a Write about substrate level and oxidative phosphorylation.
OR
b Explain the structure of starch.
- 15 a Elucidate various sources of nitrogen.
OR
b Write short notes on reductive amination.

SECTION - C (30 Marks)

Answer any **THREE** Questions

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

- 16 Derive the Michael's Menton Equation.
- 17 Discuss about the components of Photosystems **I** and **II**.
- 18 Explain the reactions of Calvin cycle.
- 19 Write a detailed account on TCA cycle.
- 20 Describe the biochemistry of nitrogen fixation in plants.