

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2018  
(Second Semester)

Branch - **BIOCHEMISTRY**

**ADVANCED PLANT BIOCHEMISTRY**

Time: Three Hours

Maximum: 75 Marks

**SECTION -A 130 Marks)**

Answer **ALL** questions

**ALL** questions carry **EQUAL** Marks (5 x 6 = 30)

- 1 a What are the pigments involved in photosynthesis?  
OR  
b Explain the Hatch - slack in C<sub>4</sub> plants.
- 2 a Explain the biosynthesis and function of Auxin.  
OR  
b What are Jasmonic acid? Write its biological function.
- 3 a Give a note on Nif genes is regulations.  
OR  
b Describe the GOGAT pathway with a neat sketch.
- 4 a Explain the portals entry of plant pathogens.  
OR  
b Explain the R gene mediated disease resistance in plants.
- 5 a Draw the structure and explain transit peptide.  
OR  
b Describe the plant mitochondrial DNA.

**SECTION -B (45 Marks)**

Answer any **THREE** questions

**ALL** questions carry **EQUAL** Marks (3 x 15 = 45)

- 6 Elucidate the Calvin's cycle.
- 7 Describe in detail the biochemistry of nitrogen fixation and ammonia assimilation.
- 8 Describe the biosynthesis of Alkaloids and its function.
- 9 Elaborate on the effect of pathogen on transcription and translation.
- 10 Give a note on (i) chloroplast DNA (ii) promiscuous DNA.