

AQ - 978

**Third Semester M. Sc. (Part - II) (CBCS)
Examination**

BOTANY

Paper - XII

**(Advanced Plant Physiology and Biochemistry - II)
(Elective)**

P. Pages : 3

Time : Three Hours]

[Max. Marks : 80

- Note :** (1) All questions are compulsory and carry equal marks.
(2) Draw neat and well labelled diagram wherever necessary.

1. Write on :

- | | |
|--|---|
| (a) Biosynthesis of sucrose. | 5 |
| (b) Chemical properties of amino acid. | 5 |
| (c) Shikimic acid pathway. | 6 |

OR

- | | |
|--|---|
| (d) Functions of Carbohydrates. | 5 |
| (e) G - Proteins. | 5 |
| (f) Sensor regulator system in Bacteria. | 6 |

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2. What are phytoalexins ? Explain its role. Add a note on R-gene.

OR

Explain in detail control of pathogens by genetic engineering. 16

3. Write on :

- (g) Effect of superoxide. 5
- (h) Jasmonate. 5
- (i) Role of NADPH oxidase. 6

OR

- (j) Role of methyl salicylate. 5
- (k) SAR. 5
- (l) Significance of lignin biosynthesis. 6

4. What is Senescence ? Explain protein metabolism during senescence. Add a note on its significance to the plant.

OR

Explain effect of endogenous plant growth regulators on senescence. Add a note on influence of temperature on senescence. 16

5. Write on :

- (m) Biotic stress. 5
- (n) Hg stress. 5
- (o) Salinity stress. 6

OR

- (p) Abiotic stress. 5
- (q) HR. 5
- (r) Oxidative stress. 6

