

Roll No. :

Total No. of Questions : 11]

[Total No. of Printed Pages : 3

BFMS-405

M.Sc. (Final) Examination, 2023

BOTANY

Paper - VII(c)

(Advanced Plant Physiology-I)

Time : 3 Hours]

[Maximum Marks : 75

Section-A

(Marks : 2 × 10 = 20)

Note :- Answer all *ten* questions (Answer limit **50** words). Each question carries **2** marks.

Section-B

(Marks : 5 × 5 = 25)

Note :- Answer all *five* questions. Each question has internal choice (Answer limit **200** words). Each question carries **5** marks.

Section-C

(Marks : 10 × 3 = 30)

Note :- Answer any *three* questions out of five (Answer limit **500** words). Each question carries **10** marks.

Section-A

1. (i) What are assimilatory powers ?
- (ii) What is CO₂ compensation point ?
- (iii) Differentiate Lyases with Ligases.

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- (iv) What are Diazotrophs ?
- (v) What are Branch Point Enzymes ?
- (vi) What are Phytoalexins ?
- (vii) Write the names of any *two* cardiac glycosides.
- (viii) What are fungal sterols ?
- (ix) What do you understand by 'Rf' ?
- (x) What is 'Lambert's law' ?

Section-B

2. Describe the significance of respiration.

Or

Describe Red drop and Emerson effect.

3. Explain the nature of enzymes.

Or

Describe the α -oxidation pathway.

4. Describe the properties of alkaloids.

Or

Explain the uses of Elicitors.

5. Differentiate C_{28} sterols with C_{29} sterols.

Or

Differentiate cardenolides with Bufadienolides.

6. Differentiate adsorption chromatography with partition chromatography.

Or

Differentiate ELISA with RIA.

Section-C

7. Describe in detail the Photosynthetic Carbon Oxidation (PCO) cycle.
8. Describe the mechanism of symbiotic nitrogen fixation.
9. Write an essay on tannins.
10. Write in detail the steroidal sapogenins.
11. Write short notes on the following :
 - (i) GLC
 - (ii) TLC
 - (iii) HPLC
 - (iv) Affinity chromatography