

2022

B. Sc. (Honours) in AGRICULTURE

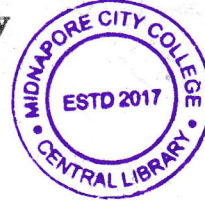
1st Semester Examination

Fundamentals of Crop Physiology

PAPER — AGS-102

Full Marks : 50

Time : 2 hours



The figures in the right-hand margin indicate marks.

*Candidates are required to give their answers
in their own words as far as practicable.*

Illustrate the answers wherever necessary.

Answer from **all** the Groups as directed.

GROUP—A

1. Answer *any five* questions : $2 \times 5 = 10$

(a) What are the characteristics of C3 plants?

(b) Define cyclic photophosphorylation.

(c) What is Kranz anatomy? Give an example.

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(Turn Over)

(2)

- (d) Define CAM plant. Give example.
- (e) Why is Krebs cycle also called TCA cycle?
- (f) How many essential nutrients are there? Write the name of primary nutrients.
- (g) What are the different types of cell division?
- (h) What do you understand by breaking of dormancy?



GROUP—B

2. Answer any four questions : 5×4=20

- (a) Describe the Z scheme of light reaction.
- (b) Briefly describe the CO₂ assimilation mechanism in C4 plants.
- (c) Write the mechanism of CO₂ assimilation in CAM plants.
- (d) "Photorespiration is a wasteful pathway" —explain.
- (e) Explain deficiency symptoms of (i) Iron and (ii) Boron in plants.
- (f) Explain the uses of ethylene in agriculture.

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(Continued)

(3)

GROUP—C

3. Answer any two questions :

- (a) Schematically describe the glycolysis process. Schematically present electron transport chain. 6+4=10
- (b) Define growth regulators. Describe the role of auxin and gibberellins. 2+(4+4)=10
- (c) Write in detail about the process of ascent of sap in plants. Discuss the role of vernalization. 6+4=10
- (d) Describe the role of the following nutrients in plants : 2×5=10

- (i) Nitrogen
(ii) Phosphorus
(iii) Potassium
(iv) Calcium
(v) Sulphur



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