



12th Science : Biology
Plant Growth and Mineral Nutrition,

DATE:

TIME: 1 hour

MARKS: 25

SEAT NO:

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Note:-

1. All Questions are compulsory.
2. Numbers on the right indicate full marks.

Section A

Q.1 Select and write the correct answer.

(4)

1. Which of the hydroponics form does not require a growing medium?
A) Aeroponics B) Aquaculture
C) None of the above D) Both ((a) & ((b)
2. Uptake of water at the expense of metabolic energy is known as _____.
A) endosmosis B) diffusion
C) active absorption D) passive absorption
3. The first physical process involved in absorption of water by root cells is by _____.
A) osmosis B) diffusion
C) imbibition D) plasmolysis
4. Essential macroelements are _____.
A) manufactured during photosynthesis B) produced by enzymes
C) absorbed from soil D) produced by growth hormones

Q.2 Answer the following.

(3)

1. What is denitrification?
2. Enlist the names of symbiotic and free living nitrogen fixing bacteria?
3. Define: Development

Section B

Attempt any Four

- Q.3 Why do the plants of legume family usually contain more protein than other plants? **(2)**
- Q.4 What leads mineral toxicity in plants? **(2)**
- Q.5 Why cucumbers, tomato and maize are day neutral plants? **(2)**
- Q.6 Name the bacteria responsible for conversion of nitrite to nitrate. **(2)**
- Q.7 A farmer adds Azotobacter culture to the soil before sowing maize. How does it increase the yield of maize? **(2)**
- Q.8 What are the sources of minerals? **(2)**

Section C

Attempt any Two

- Q.9 Write a short note on – Differentiation and Redifferentiation. **(3)**
- Q.10 Is there any relation between phases of growth and regions of growth curve? **(3)**

Q.11 What are plant growth regulators? State the characteristics of plant growth regulators. **(3)**

Section D
Attempt any One

Q.12 How mineral deficiency occurs in plants? List some symptoms in plants? **(4)**

Q.13 Describe the types of plants on the basis of photoperiod required, with the help of suitable examples. **(4)**