

Worksheet
Class XI
Biology
Plant Growth and Development

NAME-

DATE-

SECTION -A

Q1. Why is plant growth generally indeterminate?

Q2. Define growth rate.

Q3. A farmer grows cucumber plants in his field. He wants to increase the number of female flowers in them which plant growth regulator can be applied to achieve this?

Q4. What does an overripe apple release which affects all other apples in the basket?

Q5. What part of plant perceives low temperature for vernalisation?

SECTION-B

Q1. Explain different phases of growth with the help of a diagram.

Q2. What is meant by the term development? Give sequence of the development process in a plant cell.

Q3. What is plasticity? Explain with an example.

Q4. What are auxins? Give important applications of auxins.

Q5. What is bolting?

SECTION-C

Q1. Describe briefly:

- (i) Arithmetic growth
- (ii) Geometric growth
- (iii) Sigmoid growth
- (iv) Absolute and relative growth rates.

Q2. What are gibberellins? Give their functions.

Q3. Explain what is meant by the terms differentiation, dedifferentiation and redifferentiation.

Q4. A *Chrysanthemum* plant with floral buds requires more than 12 hours of dark night-time to flower. If the night is interrupted by white light for duration of an hour, will the flowers bloom the following morning? Name the pigment that perceives the light stimulus for flowering. Where is the pigment present in that plant, and what are its two forms?

Q5. Why is the term 'long day plants' a misnomer? Explain briefly.

Q6. What do you understand by Vernalisation? Describe its significance.

Q7. Which one of the plant growth regulators would you use if you were asked to:

- (a) Induce rooting in a twig.
- (b) Quickly ripen a fruit.
- (c) Delay leaf senescence.
- (d) Induce growth in axillary buds.
- (e) 'bolt' a rosette plant.
- (f) Induce immediate stomatal closure in leaves.

SECTION-D

Q1. What is photoperiodism? How do you categorize the angiosperms on the basis of their flowering response to photoperiod?