



BIOLOGY

NCERT - NCERT BIOLOGY(ENGLISH)

PLANT GROWTH AND DEVELOPMENT

Exercise

1. Define growth, differentiation, development, dedifferentiation, redifferentiation,

determinate growth, meristem and growth rate.



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2. Why is not any one parameter good enough to demonstrate growth throughout the life of a flowering plant?



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3. Describe briefly:

(a) Arithmetic growth

(b) Geometric growth

(c) Sigmoid growth curve

(d) Absolute and relative growth rates



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4. List five main groups of natural plant growth regulators. Write a note on discovery, physiological functions and

agricultural/horticultural applications of any one of them.



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5. What do you understand by photoperiodism and vernalisation? Describe their significance.



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6. Why is Abscisic acid also known as stress hormone?



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7. 'Both growth and differentiation in higher plants are open'. Comment.



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8. 'Both a short day plant and a long day plant can flower simultaneously in a given place'. Explain.



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9. Which one of the plant growth regulators would you use if you are 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.



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10. Would a defoliated plant respond to photoperiodic cycle? Why?



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11. What would be expected to happen if:

(a) GA_3 is applied to rice seedlings

(b) Dividing cells stop differentiating

(c) A rotten fruit gets mixed with unripe fruits

(d) You forget to add cytokinin to the culture medium.





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