



BIOLOGY

BOOKS - NCERT BIOLOGY (HINGLISH)

PLANT GROWTH AND DEVELOPMENT

Multiple Choice Question Mcqs

1. Ethylene is used for

(a)retarding ripening of tomatoes

(b)hastening of ripening of fruits

(c) slowing down ripening of apples

(d) Both b and c



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2. Coconut water contains



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3. The affect of apical dominance can be overcome by which of the following hormone



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4. Match the following

Column I

Column I	Column II
A. IAA	1. Herring sperm DNA
B. ABA	2. Bolting
C. Ethylene	3. Stomatal closure
D. GA	4. Weed-free lawns
E. Cytokinins	5. Ripening of fruits

(a)

(b)

(c)

(d)



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5. The term synergistic action of hormones refers to



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6. Apples are generally wrapped in waxed paper to



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7. Growth can be measured in various ways.

Which of these can be used as parameters to measure growth?



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8. Plasticity in plant growth means that



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9. To increase sugar production in sugarcane, they are sprayed with



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10. ABA acts antagonistic to



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11. Monocarpic plants are those which



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12. The photoperiod in plants is perceived at



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Very Short Answer Type Question

1. Fill in the places with appropriate word/ words.

(a) A phase of growth which is maximum and fastest is

(b) Apical dominance as expressed in dictyledonous plants is due to the presence of more..... In the apical bud than in the lateral ones

(c) In addition to auxin a..... Must be supplied to culture medium to obtain a good callus in plant tissue culture

(d).....of a vegetative plants are the sites of photoperiodic perception.



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2. Plant growth substances (PGS) have innumerable practical application name the PGS you should use to

(a) increase yields of sugarcane

(b) promote lateral shoot growth

(c) cause sprouting of potato tuber

(d) inhibit seed germination



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3. A primary root grows from 5 cm to 19 cm in a week. Calculate the actual growth rate (AGR) and relative growth rate (RGR) over the period.



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4. Gibberellins were first discovered in Japan when rice plants were suffering from bakanae (the foolish seedling disease) caused by a fungus *Gibberella fujikuroi*.

(a) Give two functions of this phytohormone

(b) which property of gibberellin caused foolish seedling disease in rice ?



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5. Gibberellins promote the formation of
Flowers on genetically plants in cannabis
whereas ethylene promotes formation of ...
flowers on genetically...plants



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6. Classify the following plants in to Long day plants (LDP) short day plants (SDP) and day neutral plants (DNP) xanthium henbane (hyoscyamus niger) spinach , rich strawberry, bryophyllum sunflower tomato maize.



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7. 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?



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8. Where are the following hormones synthesised in plants?

(a) IAA, (b) Gibberellins, (c) Cytokinins



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9. In botanical gardens and tea gardens , gardeners trim the plants regularly so that they remain bushy .Does this practice have any scientific explanation?



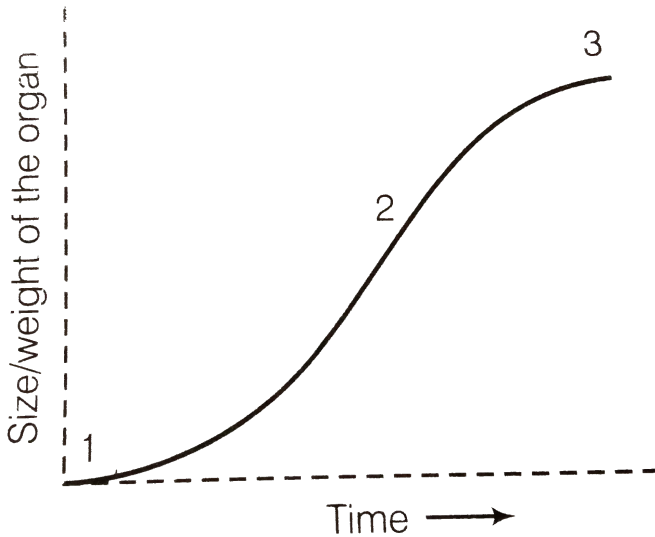
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10. Light plays an important role in the life of all organisms .Name any three Physiological processes in plants which are affected by light.



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11. In the figure of sigmoid growth curve given below label segments 1, 2 and 3.



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12. Growth is one of the characteristic of all living organism? Do unicellular organism also grow? If so what are the parameter?



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13. The rice seedlings infected with fungus *Gibberella fujikuroi* is called foolish seedling? What was the reason behind it?



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Short Answer Type Question

1. *Nicotiana glauca*, a short day plant, when exposed to more than critical period of light fails to flower. Explain.



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2. What are the structural characteristics of

- (a) meristematic cells near root tip
- (b) the cells in the elongation zone of the root



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3. Does the growth pattern in plants differ from that in animals? Do all the parts of plant grow indefinitely ? If not, name the regions of plant, which can grow indefinitely



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4. Explain in 2-3 lines each of the following terms with the help of examples taken from

different plant tissues

? (a) Differentiation,(b) De differentiation ,(c)

Re- differentiation



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5. Auxins are growth hormones capable of promoting cell elongation. They have been used in horticulture to promote growth flowering and rooting write a line to explain the meaning of the following terms related to auxins

(a) Auxins precursors ,(b) Anti auxins, (c)

Synthetic auxins



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6. The role of ethylene and abscissic acid is both positive and negative justify the statement



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7. While experimentation , why do you think it is difficult to assign any effect seen to any single hormone?



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8. What is the mechanism underlying the phenomenon by which the terminal/ apical bud suppresses the growth of lateral buds? Suggest measures to overcome this phenomenon





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9. In animals , there are glands secreting hormones , formed ? How are the hormones translocated to the site of activity?



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10. Many discoveries in science have been accidental .This is true for plant hormones also .Can you justify this statement by giving an

example? Also what terms is used for such accidental finding



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11. To get a carpet like garas lawns are mowed regularly. Is there any scientific explanation for this?



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12. In a slide showing different types of cells can you identify which type of the cell may be meristematic and the one which is incapable of dividing and how?



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13. A rubber band stretches and reverts back to its original position. Bubble gum stretches but it would not return to its original position. Is there any difference between the two

processes ? Discuss it with respect to plant growth (hint elasticity (reversible) plasticity (irreversible))



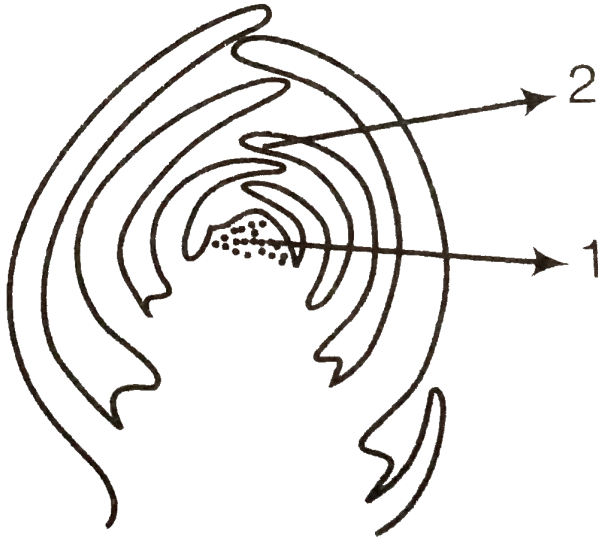
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14. Label the diagram

A. This is which part of a dicotyledonous plants?

B. If we remove part 1 from the plant, what

will happen?



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15. Both animals and plants grow. Why do we say that growth and differentiation in plants is

open and not so in animals? Does this statement hold true for sponges also?



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16. Define parthenocarpy . Name the plant hormone used to induce parthenocarpy.



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17. While eating watermelons, all of us wish it was seedless,. As a plant physiologist can you

suggeste any method by which this can be achieved .



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18. A gardener finds some broad leaved dicotweeds growing in his lawns what can be done to get rid of the weeds efficiently?



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19. On germination a seed first produces shoots with leaves, flowers appear late

A. why do you think this happens?

B. How is this advantageous to the plant?



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20. Fill in the blanks

A. Maximum growth is observed inphase.

B. Apical dominance is due to

C.initiate rooting

D. Pigment involved in photoperception in flowering plants in



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Long Answer Type Question

1. Some varieties of wheat are known as spring wheat while others are called winter wheat. Former variety is sown and planted in spring and is harvested by the end of the same season. However winter varieties if planted in

spring fail to flower or produce mature grains within a span of a lowering season . Explain, why?



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2. It is known that some varieties of wheat are sown in autumn but are harvested around next mid summer Itbvrgrt A.what could be the probable reason for this ?

B. what term is used for this promotion of lowering under low temperature?

C. which plant hormone can replace the cold treatment?



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3. Name a hormone which

A. is gaseous in nature

B. is responsible for phototropism

C. induces femaleness in flowers of cucumber

D. is used for killing weeds (dicots)

E. induces flowering in long day plants



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