BIOLOGY

BOOKS - SARAS PUBLICATION

PLANT GROWTH AN DEVELOPMENT

Exercise

1. Select the wrong statement from the following:

A. Formative phase of the cells

B. In elongation phase development of central vacuole takes place.

C. In maturation phase thickening and differentiation takes place.

D. In maturation phase, the cells grow futher,

Answer:

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2. If the diameter of the pulley is 6 inches, length of pointer is 10 inches and distance travelled by pointer is 5 inches. Calculate the actual growth in length of plant.

A. 3 inches

B. 6 inches

C. 12 inches

D. 30 inches

Answer:

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3. In unisexual plants, sex can be changed by the application of

A. Ethanol

B. Cytokinins

C. ABA

D. Auxin

Answer:

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4. Seed dormancy allows the plants to

A. overcome unfavorable climatic conditions

B. develop healthy seeds

C. reduce viability

D. prevent deterioration of seeds

Answer:

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5. What are the parameters used to measure growth of plants?

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6. Define the term plasticity. Give example.

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7. Write the physiological effect of Cytokinins.

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8. Describe the mechanism of photoperiodic induction of flowering.

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9. Give a brief account on Programmed Cell Death (PCD).

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10. Plants which produce flowers only once during life time and dies are called

A. Monocarpic perennials

B. Monocarpic annual plants

C. Polycarpic perennials

D. Polycarpic annual plants

Answer:

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11. Bamboo is classified under

A. Monocarpic perennials

B. Monocarpic annual plants

C. Polycarpic perennials

D. Polycarpic annual plants

Answer:

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12. One single maize root apical meristem can give rise to _____ new cells per hour.

A. 17000

B. 16500

C. 17500

D. 16000

Answer:

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13. Growth in plants can be measured in terms of

A. Increase in length

B. Increase in volume

C. Increase in number of cells produced

D. All the above

Answer:

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14. Thickening and differentiation of cells take place during

A. Elongation phase

B. maturation phase

C. Flowering phase

D.

Answer:

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15. Growth rate becomes zero in

A. Log phase

B. Lag phase

C. Decelerating phase

D. maturaiton phase

Answer:

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16. Growth is plotted against time and _____ shaped curve

A. S-shaped

B. L-shpaed

C. D-shaped

D. M-shaped

Answer:

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17. Newly formed cell increases in size by deposition of cell wall material in

A. Log phase

B. Lag phase

C. Decelerating phase

D. maturaiton phase

Answer:

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18. Increase in total growth of two organs measured and compared per unit time is called

A. Relative growth rate

B. Absolute growth rate

C. Geometric growth rate

D. Arithmetic growth rate

Answer:

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19. Turgidity of cell is due to

A. Nutrition

B. Temperature

C. Water

D. Oxygen

Answer:

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20. _____ helps in releasing metabolic energy essential for growth activities

A. Temperature

B. Light

C. Water

D. Oxygen

Answer:

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21. Absence of light may lead to yellowish in colour is called

A. Etiolation

B. Absission

C. Photoperiodism

D. PCD

Answer:

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22. Interfascicular cambium and vascualr cambium are examples for

A. Differentiation

B. Dedifferentiation

C. Redifferentiation

D. Plasticity

Answer:

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23. Plant growths regulators are also known as

A. chemical messenger

B. Phytohormone

C. Polyamines

D. Brassinosteroids

Answer:

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24. Plant growth promoter is

A. Ethylene

B. ABA

C. Auxin

D. Gibberellins

Answer:

25. ABA induces dormancy and gibberllins break it, is called

A. Synergistic effect

B. Antagonistic effect

C. Both

D. None of the above

Answer:

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26. The term Auxin was coined by

A. Went

B. Darwin

C. Smith

D. Garner

Answer:

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27. Which of the following is not natural auxin

A. Indole acetic acid (IAA).

B. 2,4-Dichloro phenoxy acetic acid

C. Indole utyric acid (IBA)

D. Phenyl acetic acid (PAA)

Answer:

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28. Transport through xylem from root to shoot

A. Basipetal

B. Acropetal

C. Bioassay

D. Went experimetn

Answer:

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29. This is an anti auxin compound

A. 2,4-D

B. TIBA

C. PAA

D. IBA

Answer:

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30. The term Gibberellin was coined by

A. Went

B. Kurosawa

C. Skoog

D. Yabuta

Answer:

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31. _____ promotes growth of root only at low concentrations.

A. Auxin

B. Ethylene

C. ABA

D. Gibberellins

Answer:

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32. Two phenoxy herbicides are

A. 2,4-D and 2,4,5-T

B. IAA and PAA

C. TIBA and 2,4-D

D. IBA and TIBA

Answer:

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33. Some of the polamines are known to behave like

A. growth inhibitors

B. plant hormones

C. flowering inhibitors

D. fruit ripening agents.

Answer:

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34. Who coined the term kinetin?

A. Went

B. Haberlandt

C. Skoog

D. Kurosawa

Answer:

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35. The term florigen was coined by

A. Maheswari

B. Chailakyan

C. R.Gane

D. Richmond hang

Answer:

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36. The mineral _____ is required for synthesis of IAA.

A. Copper

B. Magnesium

C. Zinc

D. Boron

Answer:

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37. Bakanae disease is caused by the fungus

A. Kurosawa

B. Gibberella fujikuroi

C. Dwarf pea assay

D. Terpeioids.

Answer:

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38. Avena curvature test in an assay for _____

A. Auxins

B. GA

C. Cytokinin

D. Ethylene

Answer:

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39. Phytochrome is

A. reddish xanthophyll pigment

B. bluish biliprotein pigment

C. rhodopsin pigment

D. None of the above

Answer:

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40. _____ promotes cell division in the presence of Auxin

A. Cytokinin

B. ABA

C. Ethylene

D. Auxin

Answer:

Watch Video Solution

41. Precursor of ethylene

A. Fuamric acid

B. Purine

C. Adenine

D. Terpenoids

Answer:

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42. Which is called stress hormone?

A. Thylene

B. Auxin

C. Abscisic acid

D. Gibberellins

Answer:

Watch Video Solution

43. Which hormone has both anti-auxin and anti-gibberellin property.

A. ABA

B. Ethylene

C. Gibberellins

D. Cytokinin

Answer:

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44. Who coined the term photoperiodism?

A. Went

B. Garner and Allard

C. Eagles and Wareing

D. Cornforth

Answer:

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45. Example of short day plant

A. chrysanthemum

B. Wheat

C. Pea

D. Oats

Answer:

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46. Which of the following is exposed to long days during their early periods of growth for flowering

A. Long day plants

B. Short day plants

C. Short long day plants

D. Long short day plants

Answer:

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47. An appropriate photo period in 24 hours cycle is

A. 25 inductive cycles.

B. 1 inductive cycle

C. 5 inductive cycles.

D. None of the above

Answer:

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48. Conversion of leaf primordia into flower primordia under suitable inductive cycles is called.

A. Photoperiodism

B. Photoneutrals

C. Intermediate plants

D. Pohotoperiodic induction

Answer:

Watch Video Solution

49. Example of 25-inductive cycles

A. Xanthium

B. Rhododendron

C. Coleus

D. Plantago

Answer:

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50. In apple and plum, the method of breaking seed dormany involves the process of

A. Impaction

B. Scarification

C. Exposing to red light

D. Stratification

Answer:

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51. Proteolytic enzymes involved in PCD in plants are

A. Phytochrome

B. Caspases

C. Phytaspases

D. Protiolytic

Answer:

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52. Cotyledons are pushed out of the spol in this type of germination

A. Epigeal germination

B. Hypogeal germination

C. Vernalization

D. Devernalization

Answer:

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53. Name the condition of a seed fails to germinate in suitable environment.

A. Viability

B. Seed dormancy

C. Impaction

D. Stratification

Answer:

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54. The branch of Botany which deals with the ageing, abscission and senescence is called

A. Phytogeography

B. Phytogerontology

C. Gerentology

D. Phytohormone

Answer:

Watch Video Solution

55. List the types of senescence.

A. Leoploid

B. Went

C. Lysenko

D. Purvis

Answer:

Watch Video Solution

56. _____ is a physological process of shedding of organs from the parent plant body.

A. Absicssion

B. Vernalization

C. Seed dormancy

D. Phytochrome

Answer:

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57. The kind of senescence occurs in annual plants when entire plant gets affected and dies

A. Progressive senescence

B. Overall senescence

C. Top senescence

D. Deciduous senescence

Answer:

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58. _____ is the precursor of IAA

A. Threonine

B. Trypotophan

C. Both of these

D. None of the above

Answer:

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59. Aspartic acid is classified under

A. Free auxin

B. precursor of auxin

C. chemical structure of auxin

D. Bound auxin

Answer:

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60. _____ is an example for polycarpic perennials.

A. Bamboo

B. Coconut

C. Paddy

D. Bean

Answer:

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61. Cells divide continuously by mitotic cell division in _____ phase.

A. Formative phase

B. Elongation phase

C. Matuaration phase

D. Lag phase

Answer:

Watch Video Solution

62. The process of maturation of meristematic cells to specify types of cells performing specirfic function is called _____

A. Differentiation

B. Dedifferentiation

C. Redifferentiation

D. Plasticity

Answer:

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63. which one _____ is growth inhibitor.

A. Auxin

B. Cytokinins

C. Ethylene

D. Gibberellins

Answer:

Watch Video Solution

64. _____ induces vascular differentiation.

A. Gibberellin

B. ABA

C. Ethylene

D. Auxin

Answer:

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65. Sudden elongation of stem followed by flowering is called

A. Apical-dominance

B. Bolting

C. Photo periodism

D. Photoperiodic induction

Answer:

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66. _____ hormone has carotenoid structure.

A. IAA

B. IBA

C. ABA

D. NAA

Answer:

Watch Video Solution

67. The photoperiod required to induce flowering is called

A. Critical day length

B. Photoperiodism

C. Photoperiodic induction

D. Vernalization.

Answer:

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68. _____ is an example for short long day plant.

A. Barely

B. Oats

C. Bryophyllum

D. Wheat

Answer:

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69. Rhododendron is an example of _____ plant.

A. Intermediate day plant

B. Day neutral plant

C. Long day plant

D. Short day plant

Answer:

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70. In vitro fertilisation means the fertiisation done inside the body.

A. Spring like

B. Winter like

C. Wind like

D. Water like

Answer:

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71. _____ was used by USA in Vietnam war fo defoliation of forest.

A. Agent green

B. Agent orange

C. Agent red

D. Agent yellow

Answer:

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72. Cytokinins are derivations of

A. Adenine

B. Guanine

C. cytosine

D. Thiamine

Answer:

Watch Video Solution

73. _____ is a liquid used in fruit ripening.

A. Ethylene

B. Ethephon

C. Ethanol

D. Ethane

Answer:

Watch Video Solution

74. Abscisic acid is formed from

A. methionine

B. Linolenic acid

C. Fumaric acid

D. Mevalonic aicd

Answer:

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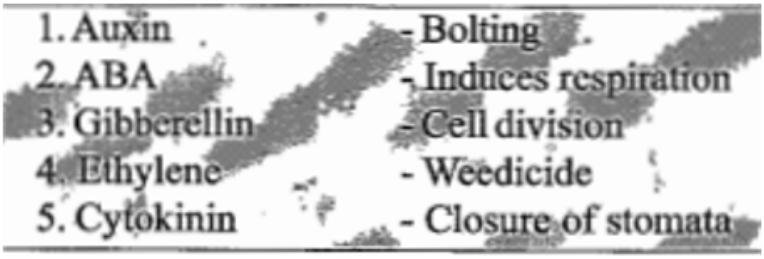
Example

1. Match the following



1. Auxin	- Bolting
2. ABA	- Induces respiration
3. Gibberellin	- Cell division
4. Ethylene	- Weedicide
5. Cytokinin	- Closure of stomata

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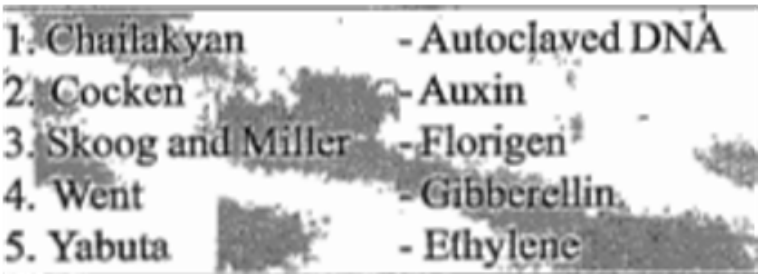
2. Match the following



1. Chailakyan	- Autoclaved DNA
2. Cocken	- Auxin
3. Skoog and Miller	- Florigen
4. Went	- Gibberellin
5. Yabuta	- Ethylene

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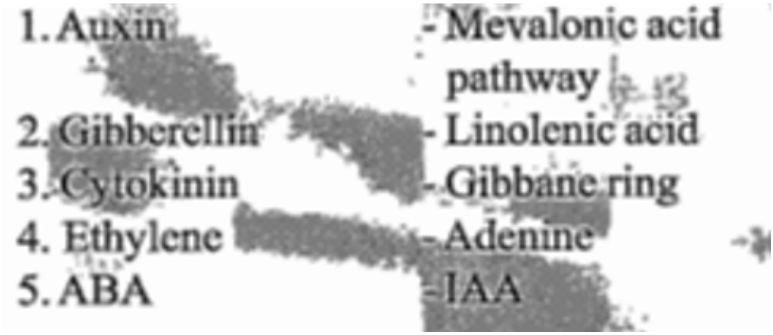
3. Match the following



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4. Mention the phases of growth in plants.

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5. What are monocarpic perennials?

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6. What are monocarpic perennials?

 Watch Video Solution

7. What are polycarpic perennial plants?

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8. Name the types of growth rate.

Watch Video Solution

9. Name the internal factors controling growth.

Watch Video Solution

10. Define differentiation.

Watch Video Solution

11. Define redifferetiation.

Watch Video Solution

12. What is meant by grand period of growth in plants?

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13. Name two anti-auxins.

Watch Video Solution

14. Name the plant growth regulators?

Watch Video Solution

15. What is special dominance?

Watch Video Solution

16. What is 'Agent orange'?

Watch Video Solution

17. Define Bolting.

Watch Video Solution

18. What is Richmond Lang effect?

Watch Video Solution

19. Define photoperiodism.

Watch Video Solution

20. Phytochrome is

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21. Write a note on vernalization.

Watch Video Solution

22. Define seed dromancy.

Watch Video Solution

23. Define Abscission.

Watch Video Solution

24. What are non-climatcteric fruits?

Watch Video Solution

25. Name the gaseous plant hormone.

Watch Video Solution

26. Define long day plants?

Watch Video Solution

27. Define short day plants?

Watch Video Solution

28. Write the hypothesis of vernalization.

Watch Video Solution

29. What are the two types of germination?

Watch Video Solution

30. Define phytogerontology.

Watch Video Solution

31. What is meant by epigeal germination?

Watch Video Solution

32. What is meant by hypogeal germination?

Watch Video Solution

33. List the types of senescence.

Watch Video Solution

34. What does bioassay mean?

Watch Video Solution

35. What is the bioassay used for ethylene.

Watch Video Solution

36. List the types of transport found in plants and define.

Watch Video Solution

37. Define growth.

Watch Video Solution

38. What are the internal factors affecting seed germination?

Watch Video Solution

39. Define etiolation.

Watch Video Solution

40. Which hormone has both anti-auxin and anti-gibberellin property.

Watch Video Solution

41. What is florigen?

Watch Video Solution

42. Name the types of seed dormancy.

Watch Video Solution

43. Photoperiodic response will not be possible in a defoliated plant. Give scientific reasons.

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44. Name the two stages involved in hypothesis of phasic development.

Watch Video Solution

45. Define seed germination.

Watch Video Solution

46. Define scarifications.

Watch Video Solution

47. Name the precursors of gibberellins.

Watch Video Solution

48. What is the formula used to measure the growth of plants of plants by Arc auxanometer?

Watch Video Solution

49. Define kinetics of growth.

Watch Video Solution

50. Write a note on antagonistic effects of hormones. Give example.

Watch Video Solution

51. What are the five major groups of plant hormones?

Watch Video Solution

52. What is seed dormancy ? Explain the methods of breaking dormancy.

Watch Video Solution

53. Define growth rate and it list its types.

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54. Name the phases of growth in S-shpaed growth curve.

Watch Video Solution

55. Define arithmetic growth rate.

Watch Video Solution

56. With the diagram giaven below explaint he relationship between absolute growth and relative growth.

Watch Video Solution

57. What is dedifferentiation? Give example

Watch Video Solution

58. Write the physiological effect of Auxin.

Watch Video Solution

59. List out the agricultural role of gibberellins.

Watch Video Solution

60. What are climacteric fruits?

Watch Video Solution

61. Which one is stress hormone

Watch Video Solution

62. Classify and explain the types of auxin.

Watch Video Solution

63. List the parctical applications of vernalization.

Watch Video Solution

64. Write a note on Saguaro cactus.

Watch Video Solution

65. What is the agricltural role of ethylene?

Watch Video Solution

66. Tabulate the differences between short long day plants and long short day plants.

Watch Video Solution

67. Draw the diagram related to arithmetic and geometric growth of embryo.

Watch Video Solution

68. Write a note on day neutral plants.

Watch Video Solution

69. What are the factors causing dormancy of seeds.

Watch Video Solution

70. Write a note on physiology of senescence.

Watch Video Solution

71. Write notes on significance of abscission.

Watch Video Solution

72. Write notes on abscission zone.

Watch Video Solution

73. Who introduced the term vernalization? Explain the technique of vernalization.

Watch Video Solution

74. Write down the agricultural role of auxin in plants.

Watch Video Solution

75. What is the importance of photoperiodism ?

Watch Video Solution

76. Write a note on sequence of developmental process in a plant cell with a diagram.

Watch Video Solution

77. Tabulate the factors affecting senescence.

Watch Video Solution

78. Phytochrome is

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79. What are the twin characteristics of growth?

Watch Video Solution

80. Write notes on significance of abscission.

Watch Video Solution

81. Explain the theories to explain the mechanism of vernalization.

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82. Mention the phases of growth in plants.

Watch Video Solution

83. Explain stages in growth by drawing the sigmoid curve.

Watch Video Solution

84. Describe an experiment to measure the growth of a plant.

Watch Video Solution

85. Write short notes on photoperiodism?

Watch Video Solution

86. Define senescence.

Watch Video Solution

87. Mention any therr characterstic features of phytohormones.

Watch Video Solution

88. List out the agricultural role of gibberellins.

Watch Video Solution

89. Explain the factors affecting growth.

Watch Video Solution

90. Define seed germination? Explain the factors affecting germination.

Watch Video Solution

91. What is seed dormancy ? Explain the methods of breaking dormancy.

Watch Video Solution

92. Explain the physiological effects of ethylene.

Watch Video Solution

93. Describe Went experiment Avena Curvature Test.

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94. Write the plant hormones, give its discovery occurrence, precursor, chemical structure bioassy and transport in plants.

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95. Explain geometric growth rate?

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