BIOLOGY

BOOKS - MBD BIOLOGY (ODIA ENGLISH)

PLANT GROWTH AND DEVELOPMENT

Question Bank

1. 6-furfuryl amino purine, 2-4-dichlorophenoxy acetic acid and indole 3

acetic acid are examples respectively for:

A. Synthetic auxin, kinetin and natural auxin

B. Gibberellin, natural auxin and kinetin

C. Natural auxin, kinetin and synthetic auxin

D. Kinetin, synthetic auxin and natural auxin

Answer: D

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2. Which hormone affects opening·and closing of stomata?

A. Zeatin

B. Abscisic acid

C. Ethylene

D. GA

Answer: B

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3. Apical dominance is due to

A. Auxin

B. Cytokinin

C. Ethylene

D. Gibberellin

Answer: A

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4. Auxins originates at the tip of the stem and controls growth elsewhere. The movement of auxin is largely:

A. Basipetal

B. Acropetal

C. Acropetal and basipetal

D. None of these

Answer: A

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5. Which one of the following pairs, is not correctly matched?

A. Gibberellic acid-Leaf fall

B. Cytokinin - Cell division

C. IAA-Cell wall elongation

D. Abscisic acid - Stomatal closure

Answer: A

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6. Foolish seedlingdisease of rice led to the discovery of:

A. ABA

B. 2,4-D

C. IAA

D. GA

Answer: D

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7. A marked increase in stem length is by:

A. GA

B. IAA

C. Florigen

D. Vernalin

Answer: A

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8. Cell division and cell differentiation are controlled by the hormone:

A. Ethylene

B. Gibberellin

C. Cytokinin

D. Abscisic acid

Answer: C

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9. Genetically dwarf plants can be induced to grow tall by using:

A. Gibberellin

B. Phycobillins

C. Auxin

D. Cytokinins

Answer: A

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10. Which of the following is called stress hormone?

A. Abscisic acid

B. Auxin

C. Cytokinin

D. Gibberellic acid

Answer: A

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11. One hormone helps in ripening of fruits while the other-stimulates closure of stomata. These are respectively:

A. Abscisic acid and auxin

B. Ethylene and abscisic acid

C. Abscisic acid and ethylene

D. Ethylene and gibberellic acid

Answer: B

12. Which of the following hormones does not naturally.occur in plants ?

A. GA

B. ABA

C. 2,4-D

D. IAA

Answer: C

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13. Cytokinin helps in

A. Cell division

B. Fruit ripening

C. BOTH(A) AND (B)

D. Senescence

Answer: A

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14. Which one of the following plant functions is not controlled by auxins'?

A. Apical dominance

B. Photoropism

C. Growth

D. Photosynthesis

Answer: D

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15. Function of ABA is

A. Apical dominance

B. Growth inhibition

C. Cell division

D. Seed germination

Answer: B

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16. Apical dominance is due to

A. Gibberellin

B. Ethylene

C. Cytokinins

D. Auxins

Answer: D

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17. Which of the following is not a physiological effect of auxin ?

A. Initiates rooting in stem cuttings

B. Promotes flowering

C. Prevents fruit and leaf drop at early stages

D. Promotes bolting

Answer:

18. Abscisic acid is known as the stress hormone because it:

A. Break seed dormacy

B. Induces flowering

C. Promotes leaf fall

D. Promotes closure of stomata

Answer: D

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19. Internodal elongation is associated with:

A. Auxin

B. Cytokinin

C. Gibberellin

D. ABA

Answer: C

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20. Cell division and cell differentiation are controlled by the hormone:

A. Abscisic acid

B. Gibberellin

C. Ethylene

D. Cytokinin

Answer: D

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21. Which one of the following generally acts as an antagonist to gibberellins ?

A. Zeatin

B. Ethylene

C. ABA

D. IAA

Answer: C

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22. Auxanometer is used for the measurement of

A. Atmospheric pressure

B. Rate of Transpiration

C. Blood sugar level

D. Plant growth

Answer: D

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23. Richmond-Lang effect can be observed in plants by The treatment of:

A. Cytokinin

B. Ethylene

C. Abscisic acid

D. Gibberellins

Answer: A

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24. Richmond-Lang effect can be observed in plants by The treatment of:

A. Auxins

B. Gibberellins

C. Kinetin

D. Ethylene

Answer: C

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25. Which hormone is gaseous in nature

A. Acetylene

B. Ammonia

C. Nitrus oxide

D. Ethylene

Answer: D

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26. Apical dominance is due to

A. Gibberellin in the lateral buds

B. Cytokinins in the leaf tip

C. Auxin the shoot tip

D. ABA in the lateral buds

Answer: C

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27. Cell division and cell differentiation are controlled by the hormone:

A. GA_3

B. Cytokinin

C. IAA

D. NAA

Answer: B

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28. Genetic dwarfism can be overcome by:

A. Auxin

B. Gibberellin

C. ABA

D. Ethylene

Answer: B

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29. The growth regulator associated with drought stress tolerance is:

A. Auxin

B. Kinetin

C. Gibberellic acid

D. ABA

Answer: D

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30. A hormone that induces fruit ripening is

A. IAA

B. GA_3

C. ABA

D. Ethylene

Answer: D

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31. Senescence is inhibited by:

A. Cytokinin

B. Auxin

C. Gibberellin

D. ABA

Answer: A

32. Gibberellins can promote seed germination because of their influence on:

A. Rate of cell division

B. Production of hydrolysing enzyme

C. Synthesis of abscisic acid

D. Absorption of water through hard seed coat

Answer: B

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33. How does pruning help in making the hedge dense?

A. It releases wound hormones

B. It induces the differentiation of new shoots from the root stock

C. It frees axillary buds from apical dominance

D. The apical shoot grows faster after pruning

Answer: C

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34. Proper sequence of phases in growth is:

A. Cell differentiation - elongation - division

B. Cell division -differentiation-elongation

C. cell elongation-division-differentiation

D. Cell division-elongation-differentiation

Answer: D

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35. Which is not a natural plant hormone

A. GA_3

B. GA_2

C. IAA

D. 2,4-D

Answer: D

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36. Hormone that has negative effect on apical dominance is:

A. Cytokinin

B. Gibberellin

C. Auxin

D. Both (A) and (B)

Answer: A

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37. Growth of lateral branches is promoted by:

A. Removal of axillary bud

B. Auxin application over decapitated apex

C. Auxin application over apical bud

D. Removal of apical bud

Answer: D

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38. Antiauxin used in picking cotton balls is:

A. 2,4-D

B. TIBA

C. NAA

D. Both (A) and (B)

Answer: B

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39. Leaf abscission, fruit fall and bud dormancy occurs by:

A. Auxin

B. Cytokinin

C. Gibberellins

D. Abscisic acid

Answer: D

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40. Which is responsible for synthesis of enzymes in seed germination ?

A. IAA

B. Gibberelin

C. Cytokinin

D. Ethylene

Answer: B

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41. Parthenocarpic tomato fruit can be produced by:

A. Treating the plants with phenylmercuric acetate

B. Removing androecium of flowers before pollen grains ate released

C. Treating the plants with iow concentrations of gibberellic acid and auxins

D. Raising the plants from vemalized seeds

Answer: C

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42. Avena curvature test is a bioassay for examining the activity of:

A. Auxins

B. Gibberellins

C. Cytokinins

D. Ethylene

Answer: A

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43. Movement in pollen tubes in angiosperms is:

A. Chemotropic

B. Chemonastic

C. Chemotactic

D. Hydrotropic

Answer: A

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44. In sleeping movement in some plants is known as:

A. Seismonasty

B. Nyctinasty

C. Photonasty

D. Thermonasty

Answer: B

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45. The movement in touch-me-not plant induced by touch is:

A. Chemotropic

B. Seismonastic

C. Phototactic

D. Epinastic

Answer: B

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46. Some flowers open during the day time and close at night this is called:

A. Phototaxy

B. Photoropism

C. Photoperiodism

D. Photonasty

Answer: D

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47. Which of the following plant movements is not related to changes in auxin levels?

A. Nyctinastic leaf movements

B. Movement of roots towards soil

C. Movement of sun flower, tracking the direction of sun

D. Movement of shoots towards light

Answer: A

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48. Phototropic and geotropic movements are linked to:

A. Gibberellins

B. Auxins

C. Enzymes

D. Cytokinin

Answer: B

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49. Name the organ that exhibits positive geotropism:

A. Stem

B. Root

C. Leaf

D. Flower

Answer: B

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50. Response of a plant towards a stimulus results:

A. Paratonic

B. Autonomic

C. Nastic

D. Nutation

Answer: A

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51. Bending of shoots towards light is due to:

A. phototaxis

B. Increase in auxin and elongation of cells in shaded area

C. More cells divide on lighted side due to auxin

D. More cells divide on light side due to gibberellins

Answer: B

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52. Opening of a flower and drooping of a bud are examples of:

A. Nyctinasty

B. Hyponasty

C. Seismonasty

D. Epinasty

Answer: D

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53. The movement in touch-me-not plant induced by touch is:

A. Thermonasty

B. Epinasty

C. Seismonasty

D. Thigmonasty

Answer: C

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54. Viviparous germination Is found in:

A. Mango plant

B. Mangrove plants

C. Bryophyllum

D. Cycas

Answer: B

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55. Germination in which cotyledon and endosperm do not come out of the soil is called:

A. Hypogeal

B. Epigeal

C. Viviparous

D. Photoblastic

Answer: A

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56. Treatment of seed at low temperature under moist conditions to break its dormancy is called:

A. Stratification

B. Scarification

C. Vernalization

D. Chelation

Answer: A

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57. In the seed rate of respiration is:

A. Normal

B. Very high

C. Very low

D. Zero

Answer: C

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58. In which type of germination hypocotyl does not elongate but the plumule itself elongates leaving the cotyledons inside the seed coat ?

A. Viviparous

B. Hypogeal

C. Epigeal

D. Non-photoblastic

Answer: B

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59. Which is not a germination inhibitor

A. ABA

B. Coumarin

C. Gibberellic acid

D. Phenolic acid

Answer: C

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60. The method applied to break the dormancy of seeds due to hard seed coat is:

A. Scarification

B. Stratification

C. Modification

D. Variation

Answer: A

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61. Dormancy in positive photoblastic seeds can be broken by exposing them to:

A. Violet light

B. Blue light

C. Far red light

D. Red light

Answer: D

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62. To make stored food available for germination, with which hormone seed should be treated ?

A. Gibberellins

B. Auxin

C. Abscisic acid

D. Cytokinin

Answer: A

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63. The light interruption of the dark period in the long day plant,

A. Prevents flowering

B. Does not prevent flowering

C. Increase flowering

D. initiates flowering

Answer: B

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64. Site of photoperiodic response in plants is:

A. Flower

B. Bud

C. Leaf

D. Stem apex

Answer: C

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65. The receptor molecule in plants that respond to changes in light is

A. Phytochrome

B. Cytochrome

C. Ferredoxin

D. Chloroplast

Answer: A

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66. Senescence is inhibited by:

A. Auxin

B. Gibberellin

C. ABA

D. Cytokinin

Answer: D

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67. Length of day and night periods that rgulates flowering is:

A. Dark period

B. Phototropism

C. Photonasty

D. photoperiodism

Answer: A

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68. Which is a short day plant?

A. Xanthium

B. Pisum

C. Cucumis

D. Avena

Answer: A

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69. Effect of low temperature which shortens vegetative period and hastens flowering is:

A. Photoperiodism

B. Vernalization

C. Florigen

D. Vernalin

Answer: B

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70. Stimulus of vernalization is received in annuals and biennials by:

A. Flower

B. Root

C. Shoot apex

D. Leaf

Answer: C

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71. Short day plants required:

A. Light

B. Dark

C. Long dark period

D. Short light period

Answer: C

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72. Process of senscence in plants can be reversed by application of:

A. Auxin

B. Gibberellin

C. Ethylene

D. Cytokinin

Answer: D

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73. In the R-FR exposure of plants it is the_____ treatment that counts.

A. First

B. Middle

C. Last

D. Sum total

Answer: C

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74. Rate of growth in plants is measured by _____

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75. ____ leads to leaf and fruit fall.

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76. ____ stimulates cell division in cordination with auxin.

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77. The hormone responsible for bolting is _____

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78. Ethylene is associated with _____ process of fruits.

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79. Auxin are synthesized at____

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80. An over-ripe apple releases____

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81. Growth regulator____ inhibits plant growth

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82. Growth regulator_____ induces parthenocarpy.

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83. _____ is a hypothetical flowering hormone in relaton to photoperiodism.

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84. Root is positively geotropic whereas stem is positively_____

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85. _____ is otherwise called heliotropism.

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86. Paratonic movement of growth are also called_____ movements.

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87. Movement due to internal stimulus is called ____ movement.

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88. _____ movement is called directional movement.

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89. Germination is the awakening of _____.

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90. _____ induces synthesis of digestive enzymes during seed germination.

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91. _____ is a hypothetical hormone released in relation to vernalization.

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92. In a short day plant, length of _____ period is critical.

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93. The pigment involved in preception of photoperiodic stimulus in plants is_____

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94. what are the Plant growth hormones

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95. Hormone responsible for elongation of internodes of rosette shoot.

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96. Response of plants to relative length of day and night:

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97. Flowering in response to temperature

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98. Capacity of stem and root to orient themselves with regard to the force of gravity.

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99. Movements in response to external stimulus is called ____.

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100. Time needed for transmission of stimulus from perceptive region to responsive region.

A. Presentation time

B. Relaxation time

C. Conversion time

D. Reaction time

Answer: transmission time

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101. Movement caused by more growth on upper surface.

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102. Temporary movement as a result of curvature.

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103. Those seeds which germinate on exposure to light.

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104. Germinating capacity of seed.

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105. Condition of seed where it fails to germinate even though the favourable environmental conditions are available.

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106. The degenerative and irreversible process in plants.

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107. Reversal of vernalization by high temperature.

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108. Cytokinins are responsible for -apical dominance in plants.

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109. Most important role of auxins is stem - elongation.

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110. _____ is the. best example of thigmonasty.

A. Mimosa pudica

B. Colocasia

C. Gloriosa

D. Rosa indica

Answer: Seismonasty

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111. How Phototropic seeds germinate on exposure to light.

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112. Rhizophora,a mangrove plant, shows _____ germination.

A. epigeal

B. hypogeal

C. vivipary

D. Imbition

Answer: Viviparous

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113. Phytochrome is responsible for mediating violet and ultraviolet light effects in plants

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114. Flowering in response to temperature

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115. According to wear and tear theory abscission occurs due to loss of activity and

cells undergo wear and tear due to disintegration of

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116. Write short notes on Auxins

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117. Write short notes on Phototropism

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118. Write short notes on Geotropism

Watch Video Solution

119. Write short notes on Photoperiodism

Watch Video Solution

120. Write short notes on Photonastic movement

Watch Video Solution

121. Write short notes on Vernalization

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122. Write short notes on senscence

Watch Video Solution

123. Write short notes on Gibberellins

Watch Video Solution

124. Write short notes on Cytokinins

Watch Video Solution

125. Write short notes on Seed dormancy

Watch Video Solution

126. Write short notes on Phytochrome

Watch Video Solution

127. Write short notes on Short day plant

Watch Video Solution

128. Write short notes on Long day plant

Watch Video Solution

129. Write short notes on Tactic movement

Watch Video Solution

130. Write short notes on Movement of locomotion

Watch Video Solution

131. Write short notes on Movement of curvature

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132. Write short notes on photonastic movement

Watch Video Solution

133. Distinguish between Tropic and nastic movement

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134. Distinguish between Auxins and gibberellins

Watch Video Solution

135. Distinguish between Short day plant and long day plant

Watch Video Solution

136. Distinguish between Cytochrome and Phytochrome

Watch Video Solution

137. Explain phototropism in terms of auxin activity.

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138. Write the functions and uses of auxins and gibberellins.

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139. Write the functions and uses of auxins and gibberellins.

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140. Describe the physiological effects of auxins and cytokinins on plant growth

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