

BIOLOGY

BOOKS - CENGAGE BIOLOGY (ENGLISH)

PLANT GROWTH AND DEVELOPMENT

Exercises

1. The period of suspended growth due to exogenous condition is termed as

B. Rest	
C. Quiescence	
D. All of these	
Answer: D	
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2. Seed dormancy in tomato seeds is due to	
A. Impermeable seed coat	

A. Dormancy

- B. Immature embryo
- C. Presence of ferulic acid in pulp
- D. Abscisic acid in pulp

Answer: C



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

- A. Scarification
- B. Pressure chamber method
- C. Stratification
- D. Impaction

Answer: C



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4. Which of the given event does not happen during seed germination?

- A. Emergence of radical
- B. Increase in the rate of respiration
- C. Hydrolysis of stored polysaccharides and proteins
- D. Photosynthesis by cotyledons

Answer: D



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5. Real growth is

- A. protoplasmic growth
- B. Cell wall growth
- C. Growth in size
- D. Growth in volume

Answer: A



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- 6. Growth in plant organs is
 - A. Qualitative and extrinsic

- B. Quantitative and intrinsic
- C. Qualitative and intrinsic
- D. Quantitative and extrinsic

Answer: C



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7. The point in S-shaped growth curve where growth is maximum is

called

- A. Inflexion point
- B. Compensation point
- C. Extinction point
- D. Deflection point

Answer: C



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8. Exponential phase in growth is characterized by

- A. Enlargements of cells
- B. Constant increase in growth rate
- C. Maturation of cells
- D. Both (1) and (2)

Answer: D



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9. Which of the following is not a growth-measuring instrument?

- A. Auxanometer
- B. Crescograph
- C. Horizontal microscope
- D. Clinostat

Answer: 3



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- 10. The plant growth is regulated by
 - A. Climatic factor

- B. Growth hormones
- C. Both (1) and (2)
- D. None of these



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11. The growth in plants differs from growth in animals in

A. Being localized and indefinite

- B. Being indefinite
- C. Having indefinite life span
- D. Having definite life span

Answer: A



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12. The scientist who suspected the presence of some growth substances was

A. Linnaeus

- B. Mendel
- C. Charles Darwin
- D. Robert Brown

Answer: C



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13. If an etiolated stem could be first saturated with auxin by spraying and then exposed to a streak of light from one side it will

- A. Bend toward the light
- B. Bend away from the light
- C. Grow straight upward
- D. Be prevented from growing

Answer: A



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14. The plant hormone which is basic in nature?

- A. Auxin
- B. Gibberellin
- C. Cytokinin
- D. Abscisic acid



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15. Which is not a physiological effect of auxins?

- A. Cell elongation
- B. Development of parthenocarpic fruits
- C. Prevention of abscission of leaves and fruits
- D. Reversal of genetic dwarfism



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16. Transport of auxins of

- A. Polar
- B. Diffuse
- C. Through xylem
- D. Through phloem

Answer: D



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17. The movement shown by a plant kept in a phototropic chamber is due to

- A. Differential synthesis of hormones
- B. Differential translocation of hormones
- C. None of these
- D. Both (1) and (2)



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18. Sprouting of potato can be prevented in stored by

A. CH_4

B. GA_3

C. MH

D. CK

Answer: B



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19. Phytotron is a device by which

A. Electron flow is measured

- B. Mutations are induced in plants
- C. The wind velocity is measured
- D. Plants are grown in controlled environment



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20. Apical dominance in higher plants is due to

A. Balance between auxins and cytokinins

- B. Enzyme activity
- C. Carbohydrates and nitrogen ratio
- D. Incorrect photoperiod



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- 21. Cholodny-Went theory is connected with
 - A. phototropism
 - B. Photomorphogenesis

- C. Photorespiration
- D. Photosynthesis



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22. Gibbane ring skeleton in structure and production of hydrolytic enzymes in barley endosperm is a characteristic of

A. Cytokinin

- B. Auxins
- C. Gibberellins
- D. Ethylene

Answer: C



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23. The synthesis of amlyase in certain cereals is stimulated by

A. IAA

- B. GA
- C. OK
- D. ABA

Answer: D



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- 24. Cytokinins are considered a part of
 - A. t-RNA
 - B. r-RNA

C. DNA

D. Vascular tissues

Answer: B



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25. An anti-ageing plant hormone from the following is

A. IAA

B. GA_3

C. Zeatin

D. C_2H_4

Answer: C



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26. Richmond-Lang effect is shown by

- (a) Auxins
- (b) Sugars
- (c) Zeatin
- (d) Gibberellin

- A. IAA
- B. OK
- C. GA
- D. C_2H_4



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27. The number of female flowers can be increased by the application of

A.	IAA

B. C_2H_4

C. CK

D. All of these

Answer: A



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28. Triple response is shown by hormone

A. Ethylene

B. CK

C. 2, 4-D

D. GA_3

Answer: A



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29. Which of the following is an antigibberellin as well as a stress hormone?

(a) ABA

(b) CK

(c) NAAM

(d) 2, 4-D

A. ABA

B. CK

C. NAAM

D. 2, 4-D

Answer: B



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- 30. Which is not true for abscisic acid?
- (a) Acts as an anti-transpirant
- (b) Synthesized in chloroplast from carotenoids
- (c) Increases stress tolerance in plants
- (d) Induces epinasty of leaves and flowers
 - A. Acts as an anti-tranpirant
 - B. Synthesized in chloroplast from

carotenoids

C. Increases stress tolerance in plants

D. Induces epinasty of leaves and flowers

Answer: A



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31. $CH_2=CH_2$ is mainly responsible for

- A. Formation of root hair
- B. Formation of nodes
- C. Ripening of fruits
- D. Formation of internodes

Answer: C



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32. For flowering, critical dark period should always be exceeded in

- A. Long day plants
- B. Short day plants
- C. Day neutral plants
- D. All types of plants



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- 33. Photoperiodic stimulus is perceived by
- (a) Meristematic cells
- (b) Leaves
- (c) Flowers
- (d) Seeds
 - A. Meristematic cells
 - **B.** Leaves

C. Flowers

D. Seeds

Answer: A



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34. Which of the following statements does not characterize photoperiodism?

A. Mediated by florigen hormone.

- B. Conversion of shoot apex into reproductive apex.
- C. Red light is stimulatory in SDP, LDP, and DNP for flowering.
- D. The number of correct photoperiodic induction may be 1-25



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35. Find the odd one (w.r.t. photoperiod) from the following.

- A. Rice
- **B.** Cosmos
- C. Chrysanthemum
- D. Larkspur

Answer: D



36. Hypothetical florigen could be produced prematurely in long day plant by exposing it to

- A. Shortening of period
- B. Red light during night
- C. Extending dark period
- D. Far red light

Answer: B



- **37.** The acquisition of ability to flower by chilling treatment is called
- (a) Vernalization
- (b) Yarovization
- (c) Springification
- (d) All of these
 - A. Vernalization
 - B. Yarovization
 - C. Springification
 - D. All of these



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38. Which is not a requirment of vernalisation?

- A. Aerobic condition
- B. Moisture
- C. high temperature
- D. Differentiated tissues

Answer: C

39. The hormone which can replace the long days and low temperature requirement for flowering in some plants is

- (a) Gibberellin
- (b) Cytokinin
- (c) Vernalin
- (d) Ethylene
 - A. Gibberellin
 - B. Cytokinin

- C. Vernalin
- D. Ethylene



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- **40.** Senescence is
 - A. Terminal irreversible phase of ageing
 - B. Combined deteriorative processes in

mature plant

C. A period between complete maturity and

final death of an organ

D. All of these

Answer: B



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41. Shoot or top senescence occurs in

A. Rice

B. Gladiolus

- C. Mango
- D. Dalbergia

Answer: B



- 42. Abscission zone is characterized by
- (a) Presence of callose plugs
- (b) Presence of a distinct layer
- (c) Activity of celluloses and pectinases
- (d) All of these

- A. Presence of callose plugs
- B. Presence of a distinct layer
- C. Activity of celluloses and pectinases
- D. All of these



- **43.** In which layer of abscission zone, the breakdown of cells occur?
- (a) Gonidial layer

- (b) Protective layer(c) Seperation layers(d) All of theseA. Gonidial layer
 - B. Protective layer
 - C. Seperation layers
 - D. All of these

Answer: C



- **44.** The leaves of Mimosa pudica (sensitive plant) droop down on touch because
 - A. The plant has nervous system
 - B. The leaves are very tender
 - C. The leaves are injured
 - D. The turgor pressure of the leaf base changes

Answer: D



45. Plants growing under prolonged water stress condition develop the phenomenon of leaf area adjustment which is

- A. Shortening of plastochron
- B. Reduction of leaf surface area
- C. Shortening of internodal length
- D. Shedding of older leaves

Answer: D



- 46. The seasonal activity of cambium is promoted by(a) Proline
- (a) I TOIIITE
- (b) Auxins
- (c) Ethylene
- (d) Abscissic acid
 - A. Proline
 - B. Auxins
 - C. Ethylene
 - D. Abscissic acid

Answer: C



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- **47.** Find odd one (w.r.t. cause of seed dormancy)
- (a) Amaranthus
- (b) Capsella
- (c) Ginkgo
- (d) Trigonella

A. Amaranthus

- B. Capsella
- C. Ginkgo
- D. Trigonella

Answer: D



- **48.** The pigment concerned with various photomorphogenetic processes in plant has
- (a) Open tetrapyrrolic structure
- (b) Absorption spectra different from that of

```
chlorophyll
(c) Positive effects on membrane permeability
(d) All of these
   A. Open tetrapyrrolic structure
   B. Absorption spectra different from that
     of chlorophyll
   C. Positive effects
                            on membrane
     permeability
   D. All of these
Answer: C
```

49. Choose the correct alternative:

Plant hormones are:

- 1. Growth regulators
- 2. Growth promoters
- 3. Growth inhibitors
- 4. All of these
 - A. Growth regulators
 - B. Growth promoters
 - C. Growth inhibitors

D. None of above

Answer: A



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50. The most common auxin is

- (a) GA
- (b) ABA
- (c) Kinetin
- (d) IAA

A. GA

- B. ABA
- C. Kinetin
- D. IAA

Answer: D



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51. Choose the correct alternative :

Gibberellin promotes cell division and elongation in:

- A. Leaves
- B. Roots
- C. Shoots
- D. All of these

Answer: C



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52. The deteriorative processes in plants that naturally terminate their functional life are collectively called

- (a) Wilting (b) Abscission (c) Plasmolysis (d) Senescence A. Wilting
 - **B.** Abscission
 - C. Plasmolysis
 - D. Senescence

Answer: D



53. Which of the following is used for artificial ripening of fruits? (a) Auxin (b) ABA (c) Ethylene gas (d) Cytokinin A. Auxin B. ABA

D. Cytokinin

C. Ethylene gas

Answer: C



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54. The induction of flowering is used for ripening of fruits?

- A. Vernalization
- B. Photoperiodism
- C. Cryobiology
- D. Chilozology



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55. Plant growth is

- (a) Limited
- (b) Unlimited
- (c) Diffused
- (b) Both a and b
 - A. Limited
 - **B.** Unlimited

C. Diffused

D. Both (1) and (2)

Answer: B



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56. Hormone produced during leaf fall is

- (a) IAA
- (b) ABA
- (c) Florigen
- (d) Kinetin

- A. IAA
- B. ABA
- C. Florigen
- D. Kinetin

Answer: B



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57. Climacteric fruit is the one which shows

A. High respiration rate at ripening

- B. Sudden change in taste
- C. Sudden change in color and shape
- D. None of the above



- **58.** Phytochrome is abundantly found in
 - A. Vascular cryptogams
 - B. Prokaryotes

- C. Brain cell
- D. Kidney cell



- **59.** Genetically dwarf plant can be converted into a plant of normal height with help of:
- (a) Auxin
- (b) Gibberellin

(c) Cytokinins (d) Auxin A. Auxin B. Gibberellin C. Cytokinins D. Auxin **Answer: B Watch Video Solution** **60.** A phytohormone involved in the de novo synthesis of α -amylase in germinating seeds is

- (a) Auxin
- (b) Gibberellin
- (c) Ethylene
- (d) Cytokinin
 - A. Auxin
 - B. Gibberellin
 - C. Ethylene
 - D. Cytokinin

Answer: B



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61. Phytochrome is responsible for

A. Photosynthesis

B. Flowering

C. Fruit formation

D. Respiration

Answer: B

62. Which of the following is a gaseous hormone?

(a) ethylene

(b) cytokinin

(c) both ethylene and auxin

(d) gibberellin

A. Ethylene

B. Cytokinin

C. Both ethylene and auxin

D. Gibberellin

Answer: A



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63. The pineapple which under natural condition is difficult to blossom has been made to produce fruits throughout the year by application of

A. IAA, IBA

- B. NAA, 2, 4-D
- C. Phenyl mercuric acid
- D. Cytokinins



- **64.** Most of the plants are seasonal due to
- (a) Photoperiodism
- (b) Phototropism

- (c) Photosynthesis
- (d) Photolysis
 - A. Photoperiodism
 - B. Phototropism
 - C. Photosynthesis
 - D. Photolysis



- **65.** Certain chemical substances having profound effect on growth ,are called
- (a) Catalytic agents
- (b) Phytohormones
- (c) Enzymes
- (d) Compost
 - A. Catalytic agents
 - B. Phytohormones
 - C. Enzymes
 - D. Compost

Answer: B



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66. Phytochrome was discovered by

A. W. Went

B. Garner and Allard

C. F.F. Blackman

D. Borthwick and Handricks

Answer: D

67. The activity of α -amylase in the endosperm of a germinating seed of barley is induced by

- A. Ethylene
- B. Cytokinin
- C. IAA
- D. Gibberellin

Answer: D



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68. A Pigment concerned with both floral induction and seed germination is

A. Florigen

B. Chlorophyll

C. Plastocyanin

D. Phytochrome

Answer: D



69. Gibberellins were first discoverded in fungal genus

A. Mucor

B. Rhizopus

C. Agaricus

D. Fusarium

Answer: D



70. The presence of auxins in a solution could be tested by

(a) Avena sativa stem tip test

(b) Carbon tetrachloride test

(c) Iodine test

(d) Defoliation test

A. Avena sativa stem tip test

B. Carbon tetrachloride test

C. Iodine test

D. Defoliation test

Answer: A



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71. Auxanometer is used to measure

A. Length

B. Width

C. Depth

D. Growth

Answer: D

72. The pigment that absorbs red and far-red light in plants, is

A. Chlorophyll

B. Phytochrome

C. Cytochrome

D. Carotene

Answer: B



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73. The hormone which can break seed dormancy is

- (a) Auxin
- (b) Gibberellin
- (c) Ethylene
- (d) Cytokinin
 - A. Auxin
 - B. Gibberellin
 - C. Ethylene

D. Cytokinin

Answer: B



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74. Which one of the following is not a synthetic auxin?

- (a) 2, 4-D
- (b) 2, 4, 5-T
- (c) NAA
- (d) IAA

- A. 2, 4-D
- B. 2, 4, 5-T
- C. NAA
- D. IAA

Answer: D



(a) IAA

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75. Which plant hormone causes fruit ripening?

(b) Cytokinin (c) Ethylene (d) GA A. IAA B. Cytokinin C. Ethylene D. GA **Answer: C Watch Video Solution**

76. Which hormone is responsible for apical
growth
(a) IAA
(b) ABA
(c) GA
(d) All of these
A. IAA
B. ABA
C. GA
D. All of these

Answer: A



- 77. Abscisic acid controls
- (a) Cell elongation and cell wall formation
- (b) Shoot elongation
- (c) Leaf fall and dormancy
- (d) Cell division
 - A. Cell elongation and cell wall formation
 - B. Shoot elongation

- C. Leaf fall and dormancy
- D. Cell division

Answer: C



- **78.** Which hormone is used to induce ripening
- in banana?
- (a) Cytokinin
- (b) Ethylene

(c) ABA

(d) GA_3

A. Cytokinin

B. Ethylene

C. ABA

D. GA_3

Answer: B



79. Which among the following is a synthetic plant hormone?

- A. IAA
- B. GA
- C. 2, 4-D
- D. ABA

Answer: C



- 80. Richmond-Lang effect is shown by (a) Auxins (b) Sugars (c) Zeatin (d) Gibberellin A. Auxins
 - B. Sugars
 - C. Zeatin
 - D. Gibberellin

Answer: C

81. Ethylene is used for

- A. Growth of plants
- B. Delaying fruit abscission
- C. Ripening of fruits
- D. Stopping the leaf abscission

Answer: C



82. Auxanometer is used to measure

- A. Respiration
- B. Transpiration
- C. Plant movement
- D. Growth

Answer: D



83. Which of the following plant hormone is extracted from fungus?

- A. Ethylene
- B. Gibberellin
- C. Cytokinin
- D. 2, 4-D

Answer: B



84. In which region of the plant does highest auxin concentration occurs

- A. Root and shoot tips
- B. Leaves and furits
- C. Mid stem portion
- D. None of these

Answer: A



85. Ethylene is used for

A. Decreasing the senescence

B. Increasing the heights of stem

C. Ripening of fruits

D. Prevention of leaf fall

Answer: C



86. The movement of pollen tube is called

(a) Chemotropism

(b) Thermotaxis

(c) Thermonastic

(d) Hydrotropism

A. Chemotropism

B. Thermotaxis

C. Thermonastic

D. Hydrotropism

Answer: A

- **87.** Which of the following plant is LDP?
- (a) Xanthium
- (b) Soyabean
- (c) Wheat
- (d) Tobacco
 - A. Xanthium
 - B. Soyabean
 - C. Wheat

D. Tobacco

Answer: A



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88. Phytotron is

- A. A controlled condition chamber for plants
- B. Leaf culture process
- C. Special culture of seeds

D. Root culture process

Answer: B



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89. Phytochrome is a

A. [Math Processing Error] form

B. P_r from

C. Both forms

D. None of these

Answer: A



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90. Which pigment is responsible for flowering in plant?

- A. Phytochrome
- B. Cytochrome
- C. Anthocyanin
- D. Xanthophyll

Answer: A



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91. The process of vernalization can be induced by

- A. Cytokinin
- **B.** Auxins
- C. Phototropin
- D. GA

Answer: D



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92. Phototropism is due to the hormone

- (a) IAA
- (b) GA
- (c) 2-4 D
- (d) Cytokinin
 - A. IAA
 - B. GA

- C. 2-4 D
- D. Cytokinin

Answer: A



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93. Phototropism affects

- A. (a) Vegetative growth
- B. (b) Internode elongation
- C. (c) Seed germination

D. (d) Reproductive growth

Answer: B



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- 94. Apical dominance is not affected by
- (a) Indoleacetic acid
- (b) Gibberellins
- (c) Indoleacetaldehyde
- (d) Indolebutyric acid

A. Indoleacetic acid

- B. Gibberellins
- C. Indoleacetaldehyde
- D. Indolebutyric acid

Answer: D



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95. The activity of α -amylase in the endosperm of a germinating seed of barley is induced by

A. Ethylene

- B. Cytokinin
- C. IAA
- D. Gibberellin

Answer: D



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96. A pigment concerned with floral induction is

A. Florigen

- B. Chlorophyll
- C. Plastocyanin
- D. Phytochrome

Answer: A



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97. Which of the following may be the substitute of photoperiodism?

A. Humidity

- B. Temperature
- C. Mineral nutrients
- D. Soil moisture

Answer: B



- **98.** Phytohormone commonly called stress
- hormone is
- (a) Auxin
- (b) Abscisic acid

(c) Gibberellin (d) Cytokinins A. Auxin B. Abscisic acid C. Gibberellin D. Cytokinins

Answer: B



99. The ripening of fruits can be hastened by
treatment with
(a) IAA
(b) Florigen
(c) Ethylene
(d) Cytokinin
A. IAA
B. Florigen
C. Ethylene

D. Cytokinin

Answer: C



- 100. Opening of floral bud is an example of
- (a) Induced movement
- (b) Hyponastic movement
- (c) Epinastic movement
- (d) Cleistogamous movement
 - A. Induced movement
 - B. Hyponastic movement

- C. Epinastic movement
- D. Cleistogamous movement

Answer: C



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101. Pruning of plants promotes branching because the axillary buds get sensitized to

- A. Ethylene
- B. Gibberellin

C. Cytokinin

D. IAA

Answer: A



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102. IAA mainly inhibits the growth of

A. Root

B. Leaf

C. Shoot

D. Generally whole plant

Answer: D



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103. Movement due to external stimuli is known as

- A. Autonomic movement
- B. Paratonic movement
- C. Amoeboid movement

D. Excretory movement

Answer: B



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104. Auxin originates aat the tip of the stem and controls growth elsewheree .The movement of auxin is largely

- A. Acropetal
- B. Basipetal

C. Lateral

D. Centripetal

Answer: B



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105. The formula of Auxin-A is

A. $C_{18}H_{30}O_7$

B. $C_{18}H_{32}O_5$

C. $C_{12}H_{30}O_6$

D. $C_{20}H_{30}N_5$

Answer: B



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106. Growth hormone responsible for apical dominance is

- A. (a) Auxin
- B. (b) Cytokinin
- C. (c) Gibberellin

D. (d) Ethylene

Answer: A



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107. 2, 4-D is a synthetic

A. Auxin

B. Gibberellin

C. Cytokinin

D. Florigen

Answer: A



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108. Which of the following induces femaleness in plants?

- A. Auxin and ethylene
- B. Ethanol
- C. ABA
- D. Gibberellin

Answer: A



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109. Fruit and leaf drop at early stages can be prevented by the application of

- A. GA_3
- B. NAA
- C. Ethylene
- D. Zeatin

Answer: B



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110. Which of the following is a weed killer?

A. 2, 4-D

B. NAA

C. GA

D. ABA

Answer: A

111. Which one is prevents over-ripening of banana and browning of cut fruits?

A. Gibberellic Acid

B. Indole-3 Acetic Acid

C. Ascorbic Acid

D. Abscisic Acid

Answer: C



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112. Which weedicide can defoliate the complete forest :

A. 2, 4-D

B. MH

C. AMO-1618

D. Biopesticide

Answer: C



113. Which is agent orange?

A. Biodegradable insecticide

B. Dioxin weedicide

C. Biofertilizer

D. Biopesticide

Answer: B



114. Phytotron is a device by which

A. Induce mutation breeding in wheat

B. Electron bombarding system

C. Plants are grown in controlled environment

D. Heavy water plants

Answer: C



115. Richmond-Lang effect is shown by

(a) Auxins

(b) Sugars

(c) Zeatin

(d) Gibberellin

A. Cytokinin

B. Auxin

C. ABA

D. All the above

Answer: A

116. A hypothetical chemical involved in the following of plants is or chemical agent which has important role in flowering is

- A. (a) Gibberellin
- B. (b) NAA
- C. (c) Florigen
- D. (d) IAA

Answer: C

117. Cell elongation in internodal regions of the green plants takes due to

A. Ethylene

B. Indole acetic acid

C. Cytokinin

D. Gibberellins

Answer: D

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118. One set of a plant was grown at 12 hours day and 12 hours night period cycles and it flow- ered while in the other set night phase was interrupted by flash of light and it did not pro- duce flower. Under which one of the following categories will you place this plant?

- A. Short day
- B. Long day
- C. Darkness neutral

D. Day neutral

Answer: A



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119. The maximum growth rate occurs in

- A. Exponential phase
- B. Stationary phase
- C. Senescent phase
- D. Lag phase

Answer: A



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120. The ability of the Venus Flytrap to capture insects is due to

- A. Chemical stimulation by the prey
- B. A passive process requiring no special ability on the part of the plant
- C. Specialized "muscle-like" cells

D. Rapid turgor pressure changes

Answer: B



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121. Why is vivipary an undesirable character for annual crop plants?

- A. It reduces vigor of the plant.
- B. The seeds cannot be stored under normal conditions for the next season.

- C. The seeds cannot exhibit long dormancy
- D. It adversely affects fertility of the plant.

Answer: B



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122. Gibberellins can promote seed germination because of their influence on

- A. Rate of cel division
- B. Production of hydrolyzing enzymes

C. Synthesis of abscisic acid

D. Absorption of water through hard seed coat.

Answer: B



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

- A. The apical shoot grows faster after pruning.
- B. It releases wound hormones
- C. It induces the differentiation of new shoots from the rootstock.
- D. It frees axillary buds from apical dominance.

Answer: D



- **124.** Parthenocarpic tomato fruits can be produced by-
 - A. Raising the plants from vernalized seeds
 - B. Treating the plants with phenylmercury acetate
 - C. Removing androecium of flowers before pollen grains are released
 - D. Treating the plants with low concentrations of gibberellic acid and auxins.

Answer: D



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125. An enzyme that can sitmulate germination of barley seeds in

- A. Protease
- **B.** Invertase
- C. lpha-amylase
- D. Lipase

Answer: C



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Assertion Reasoning

1. Assertion: if a plant is kept horizontally, auxin accumulates on lower suface.

Reason: Displasment of statoliths and other cell organelles to lower surface modifies the translocation pattern of auxin.

A. If both Assertion and Reason are true and the Reason is the correct explanation of the Assertion.

B. If both Assertion and Reason are true, but the Reason is not the correct explanation of the Assertion.

C. If Assertion is true, but Reason is false.

D. If both Assertion and Reason are false.

Answer: A



2. Assertion : Only bud, or embryo can be vernalized.

Reason: Vernalisation requires dividing cells.



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3. Assertion: Phytochrome, a protein, has regulatory function.

Reason: Various morphogenetic processes are regulated by it

4. Assertion: Auxins treatement cause acidification of cell wall and help in cell elongation

Reason: Loosening of cell wall microfibrils occurs.



5. Assertion : Cytokinin are anti ageing hormones.

Reason: They cause change in osmotic potential by increasing the volume of mature cells.



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Archives

1. Opening of floral buds into flowers, is a type of

A. Autonomic movement of growth

- B. Autonomic movement of locomotion
- C. Autonomic movement of variation
- D. Paratonic movement of growth

Answer: A



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

A. IAA-Cell wall elongation

- B. Abscisic acid-Stomatal closure
- C. Gibberellic acid-Leaf fall
- D. Cytokinin-Cell division

Answer: C



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3. The wavelength of light absorbed by Pr form of phytochrome is

A. 620 nm

- B. 640 nm
- C. 680 nm
- D. 720 nm

Answer: B



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4. Foolish seedling' disease of rice led to the discovery of

A. IAA

- B. GA
- C. ABA
- D. 2, 4-D



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5. Senescence as an active developmental cellular process in the growth and functioning of a flowering plant, is indicated in

- A. Annual plants
- B. Floral parts
- C. Vessels and tracheid differentiation
- D. Leaf abscission

Answer: D



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6. Importance of day length (photoperiodism)

in flowering of plants was first shown in

B. Petunia
C. Lemna
D. Tobacco
Answer: D
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7. One of the synthetic auxin is

A. Cotton

- B. NAA
- C. IAA
- D. GA



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8. Which one of the following acids is a derivative of carotenoids?

A. Abscisic acid

- B. Indole butyric acid
- C. Indole-3- acetic acid
- D. Gibberellic acid

Answer: A



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9. Phototropic curvature Is the resutt of uneven distribution of

A. Cytokinins

- B. Auxin
- C. Gibberellin
- D. Phytochrome



- 10. Importance of day length (photoperiodism
-) in flowering of plants was first shown in
 - A. Tomato

- B. Cotton
- C. Tobacco
- D. Potato



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11. Coiling of garden pea tendrils around any support is an example

A. Thigmotropism

- B. Thermotaxis
- C. Thigmotaxis
- D. Thigmonasty

Answer: A



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12. One of the commonly used plant growth hormone in tea plantations is -

A. Abscisic acid

- B. Zeatin
- C. Indole-3- acetic acid
- D. Ethylene



- 13. Root development is promoted by -
 - A. Auxin
 - B. Gibberellin

- C. Ethylene
- D. Abscisic acid

Answer: A



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14. Through their effect on plant growth regulators, what do the temperature and light control in the plants

A. Apical dominance

- B. Flowering
- C. Closure of stomata
- D. Fruit elongation



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

A. Zeatin

- B. Ethylene
- C. ABA
- D. IAA



- **16.** Vernalisation stimulates flowering in -
 - A. Zamikand
 - B. Turmeric

- C. Carrot
- D. Ginger



- **17.** During seed germination its stored food is mobilized by
 - A. Ethylene
 - B. Cytokinin

C. ABA

D. Gibberellin

Answer: D



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18. Which one of the following is not used for exsituplant conservation ?

A. Field gene banks

B. Seed banks

- C. Shifting cultivation
- D. Botanical Gardens



- **19.** Non-albuminous seed is produced in
 - A. Maize
 - B. Castor
 - C. Wheat

D. Pea

Answer: D



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20. Which one of the following growth regulators is known as 'stress hormone'?

A. Abscissic acid

B. Ethylene

 $\mathsf{C}.\,GA_3$

D. Indole acetic acid

Answer: A



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21. A few normal seedling of tomato were kept in a dark room. After a few days were found to have become white coloured like albinos. Which of the following terms will you use to describe them

A. Mutated

- B. Embolised
- C. Etiolated
- D. Defoliated



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22. Dr. F. Went noted that if coleoptile tips were removed and placed on agar for one hour, the agar would produce a bending when placed on one side of freshly cut

coleoptile stumps .Of what sighifcance is this exeriment

A. It made possible the isolation and exact identification of auxin

B. It is the basis for quantitative determination of small amounts of growth-promoting substances.

C. It supports the hypothesis that IAA is auxin.

D. It demonstrated polar movements of auxins

Answer: B



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23. What causes a green plant exposed to the light on only one side to bend toward the source of light as it grows?

A. Auxin accumulates on the shaded side. stimulating greater cell elongation there

B. Green plants need light to perform photosynthesis

C. Green plants seek light because they are phototropic

D. Light stimulates plant cells on the lighted side to grow faster.

Answer: A



24. Typical growth curve in plants is

- A. Parabolic
- B. Sigmoid
- C. Linear
- D. Stair-steps shaped

Answer: C



25. Auxin can be bioassayed by

A. Lettuce hypocotyl elongation

B. Avena coleoptile curvature

C. Hydroponics

D. Potometer

Answer: B



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26. The Avena curvature is used for bioassay of

- A. ABA
- B. GA3
- C. IAA
- D. Ethylene



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27. You are given a tissue with its potential for differentiation in an artificial culture .Which of the following pairs of hormones would you

add to the medium to secure shoots as well as roots

- A. Auxin and abscisic acid
- B. Gibberellin and abscisic acid
- C. IA and gibberellin
- D. Auxin and cytokinin

Answer: D



- 28. Phytochrome is a
 - A. Lipoprotein
 - B. Chromoprotein
 - C. Flavoprotein
 - D. Glycoprotein

