BIOLOGY

BOOKS - TRUEMAN BIOLOGY

PLANT GROWTH AND DEVELOPMENT AND PLANT MOVEMENTS

Multiple Choice Questions

1. Abscisic acid is synthesized more abundantly in

A. Chloroplasts

B. Endoplasmic reticulum

C. vascular tissue

D. Peroxisomes

Answer: A

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2. The respiratory activity in "cell maturation" phase as compared to other phases is

A. equal

B. less

C. more

D. dependent upon temperature

Answer: B

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3. When growth is going on at a slow rate initially, this phase is known as

A. lag period

B. log period

C. period of diminishing growth

D. exponential phase

Answer: A

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4. Optimum growth occurs in

A. Blue light

B. Red light

C. White light

D. Green light

Answer: C

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5. Maximum rate of growth is achieved during

A. lag period

B. log period

C. steady state

D. senescent phase

Answer: B

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6. Cell differentiation is accompanied during period of

A. lag phase

B. log phase

C. drminishing growth

D. senescence

Answer: C

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7. The period of steady state is never reached in the organs of

A. determinate structures

B. indeterminate structure

C. leaves

D. all the above

Answer: B

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8. When the rate of maximum growth is maintained for sometime, it is known as

A. J-shaped phase of growth

B. Linear phase of growth

C. S-shaped phase of growth

D. All the above

Answer: B

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9. Plants grow towards water, this phenomenon is called

A. 1.phototropism

B. 2.hydrotropism

C. 3. hydrotactic movement

D. 4.thigmotropism

Answer: B

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10. Movement of Sunflower towards the direction of Sun in

A. 1.photonasty

B. 2.phototropism

C. 3.nyctinasty

D. 4.seismonasty

Answer: B

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11. The seeds which are affected by the presence of light at the time of germination are known as

A. 1. non photoblastic

B. 2.photoblastic

C. 3.light hard seeds

D. 4.positively photoblastic

Answer: B

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12. The seeds of onion cannot germinate in the presence of light and hence are known as

A. negatively photoblastic

B. non photoblastic

C. photoblastic

D. light sensitive seeds

Answer: A

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13. The germination where hypocotyl grows actively bringing the seed above the soil is known as

A. epigeal

B. hypogeal

C. semi epigeal

D. vivipary

Answer: A

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14. The germination where epicotyl elongates and becomes curved keeping the cotyledons underground is known as

A. epigeal

B. hypogeal

C. semi epigeal

D. vivipary

Answer: B

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15. The process when the embryo of the seed continues growth while the latter is attached to the parent plant is known as

A. epigeal germination

B. hypogeal germination

C. vivipary

D. vernalisation

Answer: C

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16. Vivipary occurs in

A. 1)Rhizophora

B. 2)Grasses

C. 3)Bamboos

D. 4)Hydrophytes

Answer: A

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17. Correct sequence of different phases of growth is

A. division - differentiation - elongation

B. division - elongation - differentiation

C. differentiation - division - elongation

D. elongation - differentiation - division

Answer: B

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18. For germination of seed, which light is necessary

Which wavelength of light is responsible for best flowering

A. Red

B. Green

C. Far red

D. Blue

Answer: A

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19. If the tip of- seedling is cut off, growth as well as bending ceases because It hampers

A. 1.respiration

B. 2.photosynthesis

C. 3. perception of light stimulus

D. 4.transpiration

Answer: C

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20. what is vernalisation

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21. Growth hormones function

A. always as growth inhibitor

B. sometimes as growth promotors and sometimes as growth inhibitors

C. always as growth promotors

D. rarely as growth promotors

Answer: B

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22. What is not true about auxin ?

A. 1.It is derived from mevalonic acid

B. 2. It promotes cell division

C. 3.It promotes stem elongation

D. 4. It inhibits lateral growth

Answer: A

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23. The universal natural auxin of plants is

A. 1.IBA

B. 2.IAA

C. 3.NAA

D. 4.Citric auxin

Answer: B

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24. Transport of auxins is

A. diffuse

B. always acropetal

C. polar

D. non polar

Answer: C

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25. Apical dominance is

A. suppresion of growth of apical bud by nearby lateral axillary buds

B. stimulation of growth of apical bud by removal of nearby axillary buds

C. suppression of growth of lateral axillary buds by removal of apical bud

D. suppression of growth of nearby lateral axillary buds by apical bud

Answer: D

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26. Mowing on a grass lawn facilities better maintenance primarily owing to

A. wounding stimulates regeneration

B. of removal of apical dominance and stimulation of intercalary meristem

C. of removal of apical dominance and promotion of cambial activity

D. of removal of apical dominance

Answer: B

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27. Which of the following hormones is used in root formation on stem cutting?

A. 1)Kinetin

B. 2)GA

C. 3)ABA

D. 4)IBA

Answer: D

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28. Plants bend towards light because

A. 1) they need light for photosynthesis

B. 2)they need light for respiration

C. 3)cells on the shadow side elongate more

D. 4)light attracts them

Answer: C

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29. The phenomenon pf apical dominance can be overcome by exogenous application of

1. ABA

2. gibberellins

3. cytokinins

4. ethylene

A. ABA

B. gibberellins

C. cytokinins

D. ethylene

Answer: C

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30. Which increases in the absence of light?

A. Uptake of minerals

B. Uptake of water

C. Elongation of internodes

D. Ascent of sap

Answer: C

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31. The effect of IAA on the synthesis of ethylene is that it

1. is reduced

2. is induced

3. is unaffected

4. depends upon the presence of other hormones

A. is reduced

B. is induced

C. in unaffected

D. depends upon the presence of other hormones

Answer: B

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32. IAA was first isolated from

1. Corn germ oil

2. Gibberella

3. Human urine

4. Rhizopus

A. Corn germ oil

B. Gibberella

C. Human urine

D. Rhizopus

Answer: C

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33. Artificial application of auxins like IAA, IBA and NAA to unpollinated pistils can form

1. fruits with much flesh

2. larger fruits

3. sweet fruits

4. seedless fruits

A. fruits with much flesh

B. larger fruits

C. sweet fruits

D. seedless fruits

Answer: D

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34. Who amongst the following is discoverer of auxin ?

1. Skoog

2. Went

3. Thimann

4. Lavrean

A. Skoog

B. Went

C. Thimann

D. Lavrean

Answer: B

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35. _____ are sprayed on the cotton fields to defoliate and hence facilitate machine picking of bolls.

1. antiauxins

2. sodium salts of NAA

3. naphthalene acetic acid & related auxins

4. herbicides

A. antiauxins

B. sodium salts of NAA

C. naphthalene acetic acid & related auxins

D. herbicides

Answer: A

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36. The nature of all gibberellins is

A. alkaline

B. neutral

C. acidic

D. buffer

Answer: C

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37. In a plant the concentration of gibberellins is highest in

1. seeds and young leaves

2. apical buds

3. old leaves and flower buds

4. all the above

A. seeds and young leaves

B. apical buds

C. old leaves and flower buds

D. all the above

Answer: A

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38. Dwarfness can be controlled by treating the plant with

A. cytokinin

B. gibberellic acid

C. auxin

D. antigibberellin

Answer: B

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39. Hormone that breaks dormancy of seeds/potato tuber is

1. IAA

2. ABA

3. Zeatin

4. Gibberellin

A. IAA

B. ABA

C. Zeatin

D. Gibberellin

Answer: D

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40. The first cytokinin was isolated by

A. Darwin

B. Evins

C. Miller and Skoog

D. Leopoid

Answer: C

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41. The first natural cytokinin of plants is

A. zeatin

B. kinetin

C. dihydrooxyzeatin

D. riboxylzeatin

Answer: A

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42. Hormone primarily concern with cell division is

1. Ethylene

2. NAA

3. Cytokinin / zeatin

4. Gibberellic acid

A. Ethylene

B. NAA

C. Cytokinin / zeatin

D. Gibberellic acid

Answer: C

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43. Morphogenesis is controlled by an interaction between

1. auxins and gibberellins

2. auxins and cytokinins

3. gibberellins and cytokinins

4. none of the above

A. auxins and gibberellins

B. auxins and cytokinins

C. gibberellins and cytokinins

D. none of the above

Answer: B

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44. The phenomenon of delay of senescence by cytokinin is known as

1. Richmond Lang effect

2. Bohr effect

3. Kutusky effect

4. Emerson effect

A. Richmond Lang effect

B. Bohr effect

C. Kutusky effect

D. Emerson effect

Answer: A

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45. The hormones which regulate phloem transport are

A. auxins

B. cytokinins

C. gibberellins

D. ethylene

Answer: B

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46. Cytokinin synthesis is maximum in

A. roots

B. leaves

C. shoot tip

D. fruit

Answer: A

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47. Name the hormone which stimulates transverse or isodiametric growth

A. ethylene

B. GA

C. sodium salt of NAA

D. methionine

Answer: A

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48. Major precursor of ethylene production in plants is

A. lysine

B. methionine

C. alanine

D. valine

Answer: B

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49. Match the items of column I and column II

Column I	Column II
a Auxin	p GA_3
b Gibberellin	q Indole Acetic Acid
c Cytokinin	r abscisic Acid
d Dormin	s Acetic acid
	t Zeatin

A. 1)a - q, b - r, c - p, d - t

B. 2) a - q, b - s, c - p, d- t

C. 3)a - q, b - p, c - t, d- r

D. 4) a-q, b- t, c-p, d- r

Answer: C

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50. Abscisic acid is mostly found in

A. chloroplasts

B. mitochondria

C. ribosomes

D. all organelles

Answer: A

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51. Which one of the following is a natural growth inhibitor ?

A. NAA

B. ABA

C. GA

D. Auxin

Answer: B

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52. Closure of stomata' is brought about by

A. Abscisic acid

B. Kinetin

C. Giberellin acid

D. IBA

Answer: A

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53. A natural growth regulator is

A. NAA

B. Ethylene

C. 2, 4-D

D. Benzaldehyde

Answer: B

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54. Abscisic acid controls/ promotes

A. cell division

B. leaf fall, senescence and dormancy

C. shoot elongation

D. cell elongation and wall formation

Answer: B

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55. Who first suggested presence of growth regulatory chemicals in plants ?

A. 1)Darwin

B. 2)Went

C. 3)Sachs

D. 4)Paal

Answer: A

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56. Banana is natural parthenocarpic fruit due to

A. Triploid nature

B. vegetative propagation

C. high level of auxins in ovary

D. treatment with certain phytohormones

Answer: C

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57. Low concentraion of auxin inhibits growth in

A. 1)roots

B. 2)leaves

C. 3)stem

D. 4)flower bud

Answer: A

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58. To secure a good crop of tea leaves from a single healthy plant, the grower should

A. spray auxins

B. supply auxins to soil

C. remove the apical bud of main shoot and branches

D. cut off the lakeral of plant and apply auxin branches

Answer: C

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59. A hormone used to induce root formation in horticulture

A. IBA

B. GA

C. ABA

D. 2, 4-D

Answer: A

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60. In plants auxin synthesis. with high concentration occurs in

A. cortex of leaves

B. phloem cells

C. shoot tip

D. root tip

Answer: C

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61. Homones are translocated through

A. root

B. phloem

C. pith

D. rays

Answer: B

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62. The rosette habit of cabbage can be changed by applicaton of

A. GA

B. NAA

C. AbA

D. Cytokinins

Answer: A

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63. Dwarf plants can be grown into tall plants with the help of

A. phycobilins

B. auxins

C. gibberellins

D. cytokinins

Answer: C

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64. Hormone similar to animal steroidal hormone is

A. auxin

B. gibberellin

C. ethylene

D. Cytokinin

Answer: B

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65. A hormone which can substitute effect of cold treatment and photoperiodism to bring early flowering is

A. ethylene

B. gibberellin

C. cytokinin

D. florigen

Answer: B

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66. Which of the following phytohormones replaces male flowers with female flowers on monoecious plants of cucurbits ?

A. IAA

B. Cytokinins

C. GA's

D. ABA

Answer: C

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67. Which hormones help in breaking the dormancy of seed ?

(a) ABA

(b) CK

(c) GA

(d) Ethylene

A. 1)a, C, b

B. 2)a, b, d

C. 3) b, c, d

D. 4) a, b, c

Answer: C

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68. Bakanae disease in Japan was due to a fungus known as

A. Gibberella fujikori

B. Aspergillus flavus

C. Both (1) and (2)

D. Plasmopara viticola

Answer: A

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69. From which was zeatin isolated ?

A. Coconut milk

B. Pineapple

C. Soyabean

D. Groundnut

Answer: A

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70. Which of the following type of phytohormones resemble the nucleic acids in some structural aspects

A. Cytokinins

B. Auxins

C. Gibberellins

D. Abscisic acid

Answer: A

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71. Male hormone in plant is

A. auxin (IAA)

B. gibberellin (GA)

C. cytokinin (CK)

D. ethylene

Answer: B

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72. Which of the following is indispensable in all culture

A. Gibberellin (GA_3)

B. Cytokinin

C. Ethylene

D. ABA

Answer: B

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73. Climacteric fruit is the one which shows

A. autochory

B. persistent flower parts

C. high respiratory rate and ethylene at ripening

D. both (2) and (3)

Answer: C

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74. Phytochrome which is a photoreceptor for photoperiodic induction can be extracted from

A. growing bud

B. cotyledons

C. leaves

D. stem

Answer: C

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75. Phytochrome is found in

A. algae

B. vascular cryptogams

C. fungi

D. Angiosperms

Answer: D

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76. Chrysanthemum is a

A. short day plant

B. long day plant

C. day neutral plant

D.

Answer: A

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77. The plants requiring short photoperiods for floral initiation and long photoperiods for blossoming are known as

A. long day plants

B. short day plants

C. short long day plants

D. long short day plants

Answer: C

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78. In many plants the change over from vegetative to reproductive phase takes place in response to

A. the length of the day

B. the severity of temperature

C. mainly the food material available in soil

D. the oxygen present in the air

Answer: A

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79. Sugarcane is

A. amphiphotoperiodic plant

B. intermediate plant

C. day neutral plant

D. short day plant

Answer: D

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80. The period between summer and autumn is favourable to

A. short long day plants

B. long short day plants

C. day neutral plants

D. amphiphotoperiodic plants

Answer: B

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81. The period between spring and summer is favourable to

A. short long day plants

B. long short day plants

C. day neutral plants

D. amphiphotoperiodic plants

Answer: A

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82. Flowering in short day plants is induced by

A. 1.photoperiod less than 12 hours

B. 2.photoperiod below a critical length

C. 3. long night

D. 4.long day

Answer: B

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83. Which wavelengths are the most effective in photoperiodism ?

A. 1) blue and red

B. 2)red and far red

C. 3)green

D. 4)orange and red

Answer: D

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84. Light break reaction means

A. influence of short periods of dark in the light period

B. influence of short periods of light in the dark periods

C. influence of GA_3 on light periods

D. production of some inhibitors during light periods

Answer: B

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85. A chemical believed to be involved in flowering is

A. ethylene

B. cytochrome

C. florigen

D. 2, 4-D

Answer: C

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86. Vernalisation is

A. growth curve related to light

B. effect of photoperiods · of plant growth

C. speeding up ability to flower by low temperature treatment

D. diurnal photoperiodicity

Answer: C

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87. The stimulus of cold treatment (vernalisation) is perceived by

A. fruits

B. shoot apex

C. axillary buds

D. flowers

Answer: B

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88. Low temperature required for vernalization is usually between

A. $1^{\circ} - 10^{\circ} C$

B. $5 - 15^{\circ} C$

C. $1 - 30^{\circ} C$

D. $10 - 3^{\circ}C$

Answer: A

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89. Vernalisation can often be replaced by

A. auxin

B. cytokinins

C. gibberellins

D. ethylene

Answer: C

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90. Phytochrome is mainly involved in picking stimulus in

A. phototropism

B. photorespiration

C. photoperiodism

D. photosynthesis

Answer: C

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91. The pigment involved in red-far red light interconversion is

A. cytochrome

B. xanthophyll

C. lycopene

D. phytochrome

Answer: D

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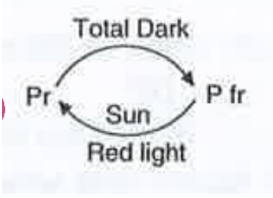
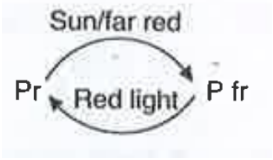
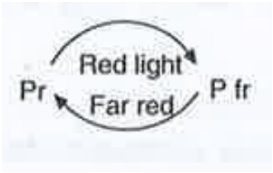
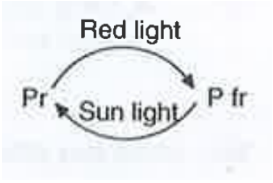
92. Which of the following is correct for phytochrome conversion reaction

A. 

B. 

C. 

D. 

Answer: C

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93. If the requisite period of low temperature treatment is followed by a penod of high tem- perature, the expected acceleration of floweing did not occur. This process is known as

A. photophosphorylation

B. dedifferentiation

C. devernalization

D. vernalization

Answer: C

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94. If night period is broken by a single flash of red light, followed by far red, red and finally far red light, what will be its effect on flowering in short day plants

A. no flowering

B. poor flowering

C. delayed flowering

D. no effect on flowering in SDP

Answer: D

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95. If a tree flowers thrice in a year (October, January and july) in nothern india, it is said to be

A. photo-and thermosensitive

B. photo- and thermo insensitive

C. photo-sensitive and thermoinsensitive

D. thermosensitive and photoinsensitive

Answer: B

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96. florigen is synthesised in

A. leaves

B. fruit

C. stem

D. root

Answer: A

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97. Flash of light in dark inhibits flowering in

A. SDP

B. LDP

C. IP

D. DNP

Answer: A

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98. In SDP, flowering is interrupted if

A. dark condition is interrupted by white/ red light

B. dark condition is interrupted by far red light

C. dark condition is interrupted by red followed by far red light

D. in short day plant flowering can not be interrupted

Answer: A

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99. In short day plants, flowering is induced by

A. short day and interrupted long night

B. short night

C. long day and interrupted night

D. none

Answer: D

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100. Maryland mammoth variety of tobacco is a

A. SDP

B. LDP

C. DNP

D. Short-long day plant

Answer: A

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101. A long day plant flowers only when it is exposed to

A. 1)Red light

B. 2)Light more than critical day length

C. 3)Light equal to critical day length

D. 4)Light less than critical day length

Answer: B

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102. Senescence of leaves can be delayed and shelf life of fruits can be increased by the spray of

A. Cytokinins

B. Gibberellins

C. auxins and Ethylene

D. ABA

Answer: A

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103. Common inhibitor of germination is

A. vernalin

B. pantothenic acid

C. GA

D. ABA

Answer: D

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104. Differentiation of shoot is promoted by

A. high auxin : cytokinin ratio

B. high cytokinin : auxin ratio

C. high gibberellin : auxin ratio

D. high gibberellin : cytokinin ratio

Answer: B

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105. Coconut milk contains:

A. 1) absicsic acid

B. 2)auxin

C. 3)cytokinin

D. 4)gibberellin

Answer: C

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106. Size of grapes increases in application of

A. 1)gibberellins

B. 2)cytokinin

C. 3)auxin

D. 4) all the above

Answer: A

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

A. ethylene

B. gibberellin

C. cytokinin

D. in dole acetic acid

Answer: C

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108. One set of a plant was grown at 12 hours day and 12 hours night period cycle and it flowered while in the other set night period cycles and it flowered while in the other set night phase was interrupted by flash of ligth and did not produce flower. Under which one of the following categories will you place this plant

A. Darkness neutral

B. Day neutral

C. Short day

D. Long day

Answer: C

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109. Leaf fall occurs in a tree when there is increase in concentration of

A. abscissic acid

B. auxin

C. gibberellins

D. cytokinins

Answer: A

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

A. rate of cell 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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111. Touch me not belongs to

A. Papilionaceae

B. Caesalpinioideae

C. Mimosoideae

D. Solanaceae

Answer: C

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112. Tendrils exhibit/twining of tendrils is due to

A. thigmotropism

B. seismonasty

C. heliotropism

D. diageotropism

Answer: A

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113. Match list -(Plant homeone) with List -II (Type -cal physiological effect) and select the correct answer the codes given the lists

List-I	List-II
A. Auxin	1. Apical dominance
B. Gibberellin	2. Cell division
C. Cytokinin	3. Fruit ripening
D. Ethylene	4. Internodal elongation

A. 1)

A	B	C	D
1	4	2	3

B. 2)

A	B	C	D
1	4	3	2

C. 3)

A	B	C	D
4	1	2	3

D. 4)

A	B	C	D
4	1	3	2

Answer: A

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114. Plants normally flowering in winter remain vegetative in summer even if they are kept at winter temperature because

A. Transpiration rate becomes very high during summer

B. Laws of limiting factors are applicable in summer

C. Pollination fails to take place in summer

D. They do not get the required day length during summer

Answer: D

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115. Which of the following statements are correct?

1.Gibberellins can substitute light treat- ment

2. Gibberellins can convert biennials into annuals

3. Gibberellins favour flowering in long day plants

4. Gibberellins induce flowering in short day plants

Select the correct answer using the codes given below

A. A)1, 2, 3 and 4

B. B)2 and 4

C. C) 1 , 3 and 4

D. D)1 , 2 and 3

Answer: D

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116. Match list -I List-II and select the correct answer using the codes given below the lists

List-I	List-II
A. Increase in wall elongation	1. Gibberellins
B. Bolting and flowering	2. Auxins
C. Phloem transport	3. Abscisic acid
D. Stoppage of cambium activity	4. Cytokinis

A. A B C D
2 1 3 4

B. A B C D
2 1 4 3

C.

A	B	C	D
1	2	4	3

D.

A	B	C	D
1	2	3	4

Answer: B

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117. The shoot branching depends upon the development of axillary buds but many of the buds in axillary position never grow out due to the

1. Inhibitory factor present in the axillary bud

2. Inhibitory factor present in the apical bud

3. Inhibition under genetic control

4. None of the above

A. Inhibitory factor present in the axillary bud

B. Inhibitory factor present in the apical bud

C. Inhibition under genetic control

D. None of the above

Answer: B

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118. Consider the following statements

1. In climacteric fruits, ethylene production is high.

2. Gibberellin present in a healthy stem causes some of the new cells to differ- entiate as phloem.

3. Loss of turgor in leaves stimulates the production of

abscisic acid.

Which of the statements given above are correct?

A. 1 and 2 only

B. 2 and 3 only

C. 1 and 3 only

D. 1, 2 and 3

Answer: C

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119. Which one does not exhibit seed dormancy ?

A. Rhizophora

B. Xanthium

C. Phaseolus

D. Cassia

Answer: A

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120. Which of the following plant hormones is correctly matched with its function

A. Abscisic acid-promotes seed dormancy

B. Gibberellic acid-promotes fruit ripening

C. Auxin-promotes leaf senescence

D. Cytokinin-promotes seed dormancy

Answer: A

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121. A long day plant with critical day length of 14 hrs will flower under which of the following treatments?

A. 1) 7 hrs light-2 hrs darkness-3 hrs light-5 hrs darkness-7 hrs light

B. 2)5 hrs light-9 hrs darkness-a hrs light-2 hrs darkness

C. 3)11 hrs darkness-13 hrs light

D. 4)6 hrs light-6 hrs darkness-7 .5 hrs light- 4. 5 hrs darkness

Answer: A

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122. Go through the following matches

(i) Auxins - Tryptophan

(ii) Ethylene - Mevalonic acid

(iii) Gibberellins - Methionine

(iv) Cytokinis - Aminopurines

Which of these are correct

A. A)(i),(ii) & (iii)

B. B)(i) & (iv)

C. C)(ii),(iii) & (iv)

D. D)(i) & (iii)

Answer: B

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123. Read the following matches

(i) Auxins - Promotes abscission of older mature leaves and fruits

(ii) Gibberellins - Stimulation of internodal growth

(iii) Abscisic acid - Stops cambial activity

(iv) Ethylene-Induces seed & bud dormancy

Which of these are correct

A. (ii) & (iii)

B. (i), (iii) & (iv)

C. (i), (ii) & (iii)

D. All are correct

Answer: C

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124. Go through the following matches

(i) Cytokinis- Inhibits secondary cambial growth

(ii) Ethylene - Prevents senescence

(iii) Abscisic acid- Stops cambial activity

(iv) Ethylene -Inuces seed & bud dormancy

Which of these are correct

A. (i)&(iii)

B. (i),(iii)& (iv)

C. (iii) & (iv)

D. All are correct

Answer: A

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125. Go through the following statements

(i) The most widely used compound as source of ethylene is ethephon.

(ii) Ethylene helps the plants to increa their absorption surface by promotin root growth and root hair formation.

(iii) 2, 4 - D is mainly used to kill mature monocotyledonous

plants.

(iv) Spraying juvenile conifers with GAs has- tens the maturity period, thus leading to early seed production.

Which of these are correct

A. (i) & (iv)

B. (i), (ii) & (iv)

C. (i), (iii) & (iv)

D. (ii), (iii) & (iv)

Answer: B

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126. Go through the following matches

(i) Abcisic acid - Delays senescence

(ii) Auxins - Control xylem

(iii) Gibberellins -Cause fruits like apple to elongate and improve its shape

(iv) Cytokinins - Promotes apical domiance caused by auxins

Which of these are correct :

A. (ii) & (iii)

B. (ii),(iii) & (iv)

C. (i),(iii) & (iv)

D. (ii),(iii) & (iv)

Answer: A

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127. Go through the following statements

(i) In geometr,ic growth, following mitotic cell division, only one daughter cell con- tinues to divide while the other differen- tiates and mature.

(ii) The ability of plants to follow different pathways in response to environment or phases of life to to.rm different kinds of structures, is called plasticity.

(iii) The mathematical expression for arith- metic growth is $Lt = L_0 + rt$ while for geo- metric growth, it is $W_1 = W_0 = W_0 e^{rt}$

(iv) The form of growth wherein new cells are always being added to the plant body by the activity of the meristem, is

called the open form of growth.

Which of these are correct .

A. (iii) & (iv)

B. (ii), (iii) & (iv)

C. (ii) & (iv)

D. All are correct

Answer: B

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128. Which one of the following statements is not correct regarding· vivipary?

A. Seeds germinate within the fruit while still attached to the mother plant

B. It usually occurs under highly saline conditions

C. It occurs in the mangrove plants

D. It involves a dormancy period for the seed

Answer: D

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129. Which of the following is a correct statement regarding the plant growth ?

A. Growth does not involve increase in number of parts

B. Growth occurs during definite periods

C. Well defined growing regions are ab- sent

D. It is generally indeterminate

Answer: D

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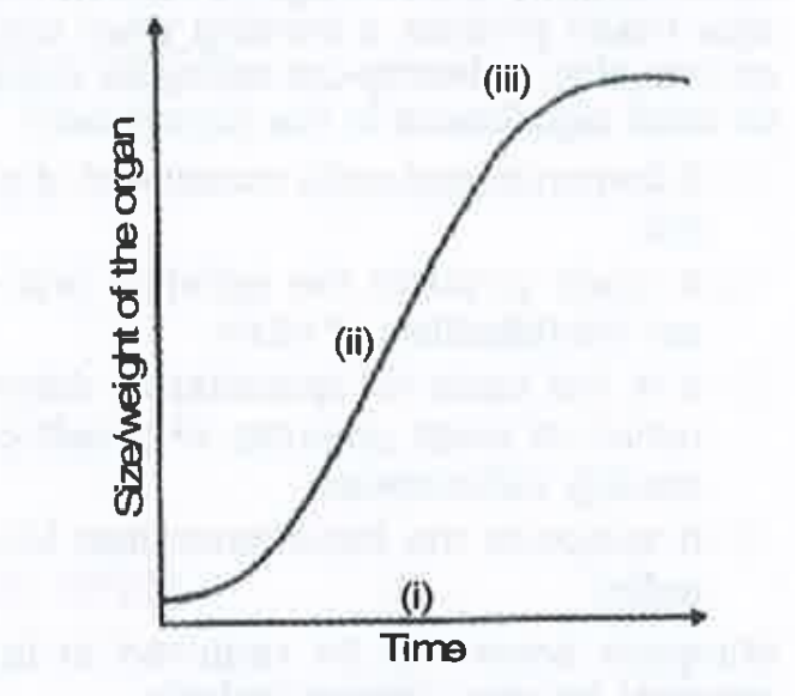
130. Go through the following figure



Choose the correct labelling.

A.

	(i)	(ii)	(iii)
(1)	log phase	Exponential phase	Stationary phase

B.

	(i)	(ii)	(iii)
(2)	Lag phase	Exponential phase	Stationary phase

C.

	(i)	(ii)	(iii)
(3)	Exponential phase	log phase	Stationary phase

D.

	(i)	(ii)	(iii)
(4)	Stationary phase	Exponential phase	log phase

Answer: B

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131. Photoperiodism is associated with the formation of

A. auxin

B. florigen

C. vernalin

D. gibberellin

Answer: B

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

A. 720nm

B. 620nm

C. 640nm

D. 680nm

Answer: D

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

A. Cytokinin - Cell division

B. IAA - Cell wall elongation

C. Abscisic Acid - Stomatal closure

D. Gibberellic Acid - Leaf fall

Answer: D

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134. Foolish Seedling disease of rice led to the discovery of

A. 2, 4-D

B. IAA

C. GA

D. ABA

Answer: C

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135. Match the items in Columns- I with Column-II and choose the correct option.

Column-I	Column-II
A. Human urine	1. Cytokinin
B. *Gibberella fujikuroi*	2. Auxin
C. Herring fish DNA	3. Ethylene
D. Ripening fruits	4. Abscisic acid
E. Aged leaves of plants	5. Gibberellins

A. 1)A-2,B-5,C-1,D-3 ,E-4

B. 2)A-2,B-3,C-4,D-5 ,E-1

C. 3)A-1,B-5,C-2,D-3 ,E-3

D. 4)A-5,B-4,C-3,D-2 ,E-1

Answer: A

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136. One of the synthetic auxin is

1. GA

2. IBA

3. NAA

4. IAA

A. GA

B. IBA

C. NAA

D. IAA

Answer: C

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137. Cytokinins which have specific effect in cytokinesis are modified forms of

A. Cytoslne

B. Adenine

C. Guanine

D. Thiamine

Answer: B

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138. Photoperiodism was first characterized in

A. Cotton

B. Tobacco

C. Potato

D. Tomato

Answer: B

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

1. Thermotaxis

2. Thigmotaxis

3. Thigmonasty

4. Thigmotropism

A. Thermotaxis

B. Thigmotaxis

C. Thigmonasty

D. Thigmotropism

Answer: D

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140. Phototropic curvature is result of uneven distribution of

A. Auxin

B. Gibberellin

C. Phytochrome

D. Cytokinins

Answer: A

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141. Transport of cytokinin in the plant body is

A. Basipetal

B. Lateral

C. Acropetal

D. On all sides

Answer: C

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142. Bolting hormone is

A. gibberellin

B. ABA

C. auxin

D. cytokinin

Answer: A

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143. Auxanometer is used to measure plant organ

A. the growth in length of a plant organ

B. the growth in breadth of a plant organ

C. population of the pests attacking a plant

D. all of the above

Answer: A

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

A. ABA

B. IAA

C. Zeatin

D. Ethylene

Answer: A

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

A. Closure of stomata

B. Fruit elongation

C. Apical dominance

D. Flowering

Answer: D

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146. Apical dominance is caused by

A. Auxins

B. Gibberellins

C. Cytokinins

D. Abscissic acid

Answer: A

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147. The natural plant hormone isolated from corn kernels and coconut milk is

A. Florigen

B. GA_3

C. Auxins

D. Zeatin

Answer: D

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148. Low temperature treatment to speed up the process of flowering is referred to as

A. Vernallzatlon

B. Cryobiology

C. Photoperiodism

D. Pruning

Answer: A

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149. During seed germination, its stored food is mobilised by

A. ABA

B. Gibberellin

C. Ethylene

D. Cytokinin

Answer: B

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150. Which one of the following plant hormone (phytohormone) Is known as a stress hormone

A. Indole acetic acid

B. Abscisic acid

C. Ethylene

D. GA_3

Answer: B

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151. A few normal seedlings 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. Defoliated

B. Mutated

C. Embolised

D. Etiolated

Answer: D

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152. 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 signifcance is this experiment

A. It demonstrated polar movement of auxins.

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

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

D. It supports the hypothesis that IAA is auxin

Answer: B

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153. Minerals known to be required in large amounts for plant growth include

A. calcium, magnesium, manganese, cop- per

B. potassium, phosphorus, selenium, bo- ron

C. magnesium, sulphur, iron, zinc

D. phosphorus , potassium, sulphur, calcium

Answer: D

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154. The rate of growth of any organism follows

Or

Typical growth curve in plants is

A. 1)linear

B. 2)stair-steps shaped

C. 3)parabolic

D. 4)sigmoid

Answer: D

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

A. Green plants seek light because they are phototropic

B. Light stimulates plant cells on the light- ed side to grow faster

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

D. Green plants need light to perform pho- tosynthesis

Answer: C

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156. Auxin can be bioassayed by

A. avena coleoptile curvature

B. hydroponics

C. potometer

D. lettuce hypocotyl elongation

Answer: A

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157. The Avena curvature is used for bioassay of

A. GA_3

B. IAA

C. Ethylene

D. ABA

Answer: B

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158. 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 medum to securre shoots as well as roots

A. IAA and gibberemn

B. Auxin and cytokinin

C. Auxin and abscisic acid

D. Gibberellin and abscisic acid

Answer: B

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159. Phytochrome is

A. 1)Flavoprotein

B. 2)Glycoprotein

C. 3)Lipoprotein

D. 4)Chromoprotein

Answer: D

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160. study the four statements (A-D) given below and select the two correct ones out of them

(A) Definition of biological soecies was given by Ernst mayr

(B) photoperiod does not affect reproduction in plants

© Binomial nomenclature system was given by Ernst Whittaker

(D) In unicellular organisms, reproduction is synonymous with growth

The two correct statments are

A. 1)(ii) and (iii)

B. 2) (iii) and (iv)

C. 3)(i) and (iv)

D. 4)(i) and (ii)

Answer: C

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161. Which of the following prevents falling of fruits

OR

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

A. 1)Cytokinins

B. 2)Ethylene

C. 3)Auxins

D. 4)Gibberellic acid

Answer: C

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