BIOLOGY

BOOKS - ARIHANT NEET BIOLOGY (HINGLISH)

PLANT GROWTH AND DEVELOPMENT

Check Point

1. A permanent increase in size, volume, from or weight of a plant is known as

A. growth

B. metabolism

C. development

D. Both (a) and (c)

Answer: A

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2. In plants, the indeterminate structures are

A. vegetative stem and flowers

B. vegetative root and leaves

C. vegetative stem and root

D. leaves, flowers and fruits

Answer: C

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3. Which among the following is incorrect about meristematic cells?

A. They are present in the root apex and shoot apex

B. They have a dense cytoplasm and a large nucleus

C. They are larger than the usual cells

D. They have a high respiration rate

Answer: C

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4. The phase of growth where cell wall starts accumulating new material is known as

A. phase of cell formation

B. phase of elongation

C. phase of differentiation

D. primary growth

Answer: B

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5. Geometric type of growth is observed commonly in

A. higher plants

B. bryophytes and pteridophytes

C. microorganism

D. gymnosperms

Answer: C

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6. Geometric growth represents.....graph.

A. J-shaped

B. S-shaped

C. bell-shaped

D. linear graph

Answer: B

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7. Slow growth takes place in the

A. log phase

B. lag phase

C. exponential phase

D. linear phase

Answer: B

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8. Growth regulators are also known as

A. phytohormones

B. oxygen

C. light

D. water

Answer: A

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9. We can measure growth in a plant by using

A. auxonometer

B. horizontal microscope

C. crescograph

D. All of these

Answer: D

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10. The whole series of morphogenetic changes, which oocur in an organism during its life cycle is known as

A. differentiation

B. development

C. growth

D. None of these

Answer: B

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11. During differentiation of normal cells into tracheary elements, the changes which occurs are

A. elongation of cells and oxidation of food

B. elongation of leaves and development of an elastic lignocellulosic secondary wall

C. elongation of cells and toxin accumulation

D. elongation of cells, loosing the protoplasm and development of a

strong lignocellulosic secondary wall

Answer: D

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12. Dedifferentiating cells is an example of

A. tracheary element

B. shoot apex

C. cork cambium

D. root apex

Answer: C

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13. Redifferentation implies

A. loss of ability to divide in dedifferentiated cells

B. damage of protoplast

C. release of metabolic energy

D. shortage of food

Answer: A

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14. Which among the following is an intrinsic factor necessary for plant development ?

A. Temperature

B. Light

C. Growth regulators

D. Water

Answer: C

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15. The ability of a plant to modify its development is called

A. elasticity

B. plasticity

C. differentiation

D. specialisation

Answer: B

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16. A plant hormone is

A. an icon that alters turgor pressure

B. a pigment that responds to environmental changes

C. an organic compound

D. a secondary metabolic compound

Answer: C

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17. The plant hormones , which promote growth are

A. gibberellins and ethylene

B. auxin gibberellins and cytokinin

C. abscisic acid , ethylene and gibberellins

D. auxins, cytokinins and abscisic acid

Answer: B

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18. Auxin synthesis occurs in

A. roots/shoot tips

B. cortex

C. xylem

D. phloem

Answer: A

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19. Who isolated the first naturally occurring auxin from human urine?

A. Kogl and Haagen Smith

B. FW Went

C. Charles Darwin and Francis Darwin

D. P Boyser - Jenseen

Answer: A

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20. Choose the natural auxin of the following.

A. antiauxin

B. NAA

C. 2, 4-D

D. indole acetic acid

Answer: D

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21. A bioassay for determining the activity of auxin is

A. Avena curvature test

B. Cereal endosperm test

C. Root growth inhibition test

D. Both (a) and (c)

Answer: D

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22. Parthenocarpy induced by

A. ethylene

B. spraying auxin on pistil

C. spraying auxin on fruit

D. spraying auxin on leaf

Answer: B

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23. Which among the following was employed as a component of a jungle defoliant known as agent orange?

A. 2, 3, 5-triodoberzoic acid

B. 4-chlorophenoxy isobutyric acid

C. 2, 4 ,5-trichlorophenoxy acetic acid

D. Indole butyric acid

Answer: C

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24. The precursor for plant hormone gibberellins is

A. tryptophan

B. acetyl Co-A

C. succinyl Co-A

D. histidine

Answer: B

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25. Gibberellins increase the rate of malting by

A. enhancing starch digestion

B. decreasing the rate of starch digestion

C. mobilisation of auxins

D. stimulating the synthesis of hydrolytic enzymes

Answer: A

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26. Bolting and flowering require

A. a short day and warm conditions

B. a long day and humid conditions

C. a short day and cold conditions

D. a long day and cold conditions

Answer: D

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27. Indentify the statement which is incorrect about cytokinins.

A. Cytokinins is a purine derivative

B. The first natural cytokinin was discovered by Samuki et al

C. A lot of cytokinins are constituents of tRNAs

D. It occurs in region of heigh cell division

Answer: B

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28. Plant hormones, which induce femaleness in plants are

A. auxins and gibberellins

B. cytokinin and auxins

C. gibberellins and ethylene

D. cytokinins and abscisic acid

Answer: B

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29. Ethylene is produced from

A. adenine

B. methionine

C. tryptophan

D. purine

Answer: B

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30. Abscisic acid causes the stomata to close during stress by

A. enhancing droping of leaves

B. inducing synthesis of carotenoids

C. inhibiting an ATP dependent porton pump

D. abscission of leaves

Answer: C

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31. The cause of seed dormancy in Lepidium is

A. the presence coumorin which seed germination

B. immaturity of embryo at the time of seed germination

C. mechanical resistance of seed coat

D. the presence of high concentration of salt in the seed at the time of shedding

Answer: C

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32. Seed dormancy can be broken by

A. auxin

B. cytokinin

C. ABA

D. Both (a) and (c)

Answer: D

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33. Photoperiodism influences

A. seed germination

B. vegetative growth

C. internode elongation

D. All of these

Answer: D

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34. The phenomenon of photoperiodism was discovered by

A. Garner and Allard

B. Darwin and Darwin

C. Lethom and skoog

D. Yabuta and Samuki

Answer: A

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35. Which plant will require light period more than critical length?

A. Chrysanthemum

B. Bryophyllum

C. Triticum

D. Spinacia

Answer: D

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36. Depending on the critical photoperiod required for flowering, plants have been divided into

A. Short day plants, long day plants and day neutral plants

B. Long day plants, long -short day plants and short-long day plants

C. Short day plants, long day plants, day neutral plants, short -long day plants, and long-short day plants.

D. Short day plants, long -short day plants and day neutral plants

Answer: C

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37. Long day plants fail to flower by

A. short dark period

B. long light period

C. long continuous dark period

D. short day during early period of growth

Answer: C

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38. Which of the following set contains only long -day plants?

A. Bryophyllum, Secale, Glycine max, Spinacia, Triticum

B. Cucumber, sunflower, Hyoscyamus niger

C. Wheat, oat, radish, lettuce

D. Aster, Dahlia, sugarcance, oat

Answer: C

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39. The stimulus for photoperiod is present in

A. stem

B. leaves

C. flower bud

D. petiole

Answer: B

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40. Which statement among the following is false regarding phytochrome?

A. It exists in two interconvertible forms P_r and P_{fr}

B. P_r absorbs light of wavelength 630 nm

C. P_r is present in cytoplasm

D. The physiologically active form is P_{fr}

Answer: B

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41. In the following reaction, what is expressed by A and B?

$$P_r \underset{B}{\overset{A}{\Longleftrightarrow}} P_{\text{fr}}$$

A. A-Light B-Dark

B. A-Dark B-Light

C. A-Far-red light B-Red light

D. A-Red light B-Far-red light

Answer: D

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42. Chemically the flowering hormone or flower is similar to

A. gibberellins

B. auxins

C. cytokinins

D. zeatin

Answer: A

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43. The regions, which perceive stimulus for low temperature is/are

A. embryo tip

B. root apical meristem and immature leaves

C. short apical meristem

D. All of the above

Answer: D

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44. The hypothetical hormone that induces vernalisation is called as ..... .

A. vernalin

B. florigen

C. acetic acid

D. auxin

Answer: A

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45. Find out which one is an incorrect match?

A. Chemotactic movement-Antherozoids of pteridophytes

B. Thermotactic movement-Motile algae

C. Ciliary movement -Mimosa pudica

D. Ciliary movement-Volvox

Answer: C

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Chapter Exercises Taking It Together

1. The basis to the phenomenon of growth is

A. formation of new protoplasm

B. formation of new wall material

C. formation of a central vacuole

D. Both (a) and (c)

Answer: A

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2. Growth is maximum in the zone of

A. cell division

B. cell elongation

C. cell maturation

D. All of these

Answer: B

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3. The phenomenon of growth is immediately followed by

A. senescence

B. dedifferentiation

C. redifferentiation

D. maturation

Answer: D

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4. The experimental material used by Darwin

A. Digitaria

B. Phleum

C. Phalaris

D. Phragmites

Answer: C

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5. When night temperature is low during winter season,the size of potato tuber will

A. increase

B. decrease

C. Both (a) and (b)

D. no effect

Answer: B

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6. Growth can be measured in various ways. Which of these can be used as parameters to measure growth?

A. increase in cell number

B. increase in cell size

C. increase in length and weight

D. All of the above

Answer: D

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7. Plasticity in plant growth means that

A. plant roots are extensible

B. plant development is dependent on the environment

C. stems can extend

D. None of the above

Answer: B

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8. Indole-3-acetic acid called auxin, was first isolated from

A. human urine

B. corn germ oil

C. Fusarium

D. Rhizopus

Answer: A

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9. Monocarpic plants are those which

A. bear flowers with one ovary

B. flower once and die

C. bear only one flower

D. All of the above

Answer: B

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10. The differentiation, which continues through all the phases of growth is known as

A. structural differentiation

B. physiological differentiation

C. growth differentiation

D. total differentiation

Answer: B

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11. Which process is not involved in the development of grain into a mature wheat plant?

A. Mitosis

B. Differentiation of cells

C. Increase in size of cells

D. Meiosis

Answer: D

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

A. Went

B. Sachs

C. Darwin

D. Paal

Answer: A

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13. Which of the following phytohormone does not occur naturally in plants ?

A. 2, 4-D

B. Gibberellic acid

C. 6-furfuryl amino purine

D. IAA

Answer: A

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14. Who demonstrated that the severed tip of Canary grass would resume phototropic sensitivity, when placed back in its position?

A. Darwin

B. Went

C. Paal

D. Boysen-Jensen

Answer: A

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15. Charles Darwin and his son Francis discovered (around 1880) that a grass seedling bends towards light only if the

A. stem is at least 10 cm long

B. tip of the coleoptile is present and exposed to light

C. cotyledon is present and exposed to light

D. nights are long in comparison with the days

Answer: B

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16. Avena coleptile auxin is

A. IBA

B. indole-3- lactic acid

C. indole -2-acetic acid

D. indole -3 - acetic acid

Answer: D

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17. The curvature causing stimulus is active on the dark side of the coleoptile tip.It was first demonstrated by

A. Fitting

B. Boysen-Jensen

C. Paal

D. Went

Answer: B

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18. In decapitated plants, axillary buds are activated because

A. absence of auxin

B. more food material is available to them

C. amount of cytokinin increases in them

D. they get more light

Answer: A

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19. Auxin inhibits the growth of

A. apical buds

B. lateral axillary buds

C. roots on stem cuttings

D. parthenocarpic development of fruits

Answer: B

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20. Apical dominance in higher plants is due to

A. phytohormone

B. enzymes

C. photoperiodism

D. requirement of light

Answer: A

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21. Apical dominance is caused when auxin

A. concentration is more than cytokinins

B. concentration is less than cytokinins

C. and cytokinin concentration are equal

D. and cytokinin concentration are fluctuating

Answer: A

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22. The plant growth regulator involved in xylem differentiation is

A. gibberllins

B. cytokinins

C. auxin

D. ABA

Answer: D

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23. The lateral buds are induced to grow when the concentration of cytokinin is

A. more than auxins

B. less than auxins

C. more than gibberellins

D. more than gibberellins and ABA

Answer: A

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24. Which of the following effects of auxins on plants is the basis for commercial application

A. Callus formation

B. Curvature of stem

C. Induction of root formation in stem cuttings

D. All of the above

Answer: C

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25. Seedless fruits can be developed by treating the unpollinated ovaries with

A. auxins

B. colchicine

C. sucrose solution

D.

Answer: A

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26. Fruit drop is caused by

A. more auxin in fruit than in stem

B. less auxin in fruit than in stem

C. equal distribution of auxin in stem and fruit

D. absense of auxin in stem and fruit

Answer: B

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27. Which hormone plays an important role in the formation of roots?

A. Gibberellin

B. Auxin

C. Cytokinin

D. Ethylene

Answer: B

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28. Which of the following is the effect of NAA?

A. production of lateral buds

B. Increase in the growth of all parts

C. Delay in senescence

D. Lodging

Answer: D

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29. The synthetic hormone used as a weedicide is

A. indole 3-acetic acid

B. gibberellic acid

C. 2, 4-dichlorophenoxy acetic acid

D. malic hydrazide

Answer: C

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30. Negative geotropism in horizontle stems is caused by

A. accumulation of auxins on the lower side

B. accumulation of auxins on the upper side

C. cell shrinkage on the lower side

D. cell enlargement on the upper side

Answer: A

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31. High concentration of auxins would

A. prevent laterial buds to grow

B. induce flowering

C. induce cell division

D. break seed dormany

Answer: A

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32. In a unilaterally illuminated coleoptile tip, the precentage of auxin on the illuminated side is

A. $17\ \%$

B. $27\ \%$

C. $37\ \%$

D. $47\ \%$

Answer: B

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33. The auxin produced in the leaves is transported through the

A. Only xylem

B. xylem and phloem

C. Only phloem

D. xylem or phloem

Answer: C

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34. Which one prevents premature fall of fruit ?

A. NAA

B. Ethylene

C. GA_3

D. Zeatin

Answer: A

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35. Which of the following is not an influence of auxins?

A. Apical dominance

B. Parthenocarpy

C. Tropic movements

D. Bolting

Answer: D

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36. In tissue culture, differentiation of root and shoot can be controlled by

A. modifying auxin and cytokinin ratio in the medium

B. using tissue of right size

C. giving temperature shocks

D. change in light intensity

Answer: A

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37. Synthetic auxins are employed for

A. ripening of fruits

B. increasing size of fruits

C. killing weeds

D. preventing elongation of internodes

Answer: C

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38. Which one among the following chemical is wued for causing defoliation of for causing defoliation of forest trees

A. Amo-1618

B. Phosphon -D

C. Malic hydrazide

D. 2, 4-D

Answer: D

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39. Auxins are known to induce

A. female flowers in male plant

B. male flowers in female plants

C. male sterility in bisexual plants

D. early bolting

Answer: A

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40. If the growing plant is decapitated, then

A. axillary buds are inactivated

B. axillary buds are activated

C. leaves become yellow and have a tendency to fall off

D. growth stops

Answer: B

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41. Which one of the following is agent orange ?

A. Weedicide with dioxin

B. Chemical used in luminous paint

C. Biodegradable insecticide

D. Colour used in fluorescent lamp

Answer: A

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42. TIBA is

A. a gibberellin

B. an antiauxin

C. an auxin

D. kinetin

Answer: B

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43. The metabolic product thought to give rise to gibberellins is

A. citric acid

B. phosphoenol pyruvic acid

C. malic acid

D. acetyl coenzyme -A

Answer: D

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44. Gibberellin was first extracted from

A. Gibberella fujikuroi

B. Gelidium

C. Gracelaria

D. Aspergillus

Answer: A

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45. In 1920s, the Japanese biologist Kurosawa and his colleagues discovered the foolish-seedling disease , in which rice plants grew too tall, mainly because of

A. a gibberellin secreting fungi

B. the herbicide 2, 4-D

C. degraded nucleic acids

D. too much auxin, due to stagnant water in the fields

Answer: A

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46. Gibberellic acid has been successfully employed to induce flowering

A. short -day plants under long -day conditionds

B. long-day plants under short - day conditiions

C. the day - neutral plants

D. few plants

Answer: B

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47. The gibberellins have been commercially exploited for

A. increasing the size of grape fruits

B. breaking the dormancy of seeds

C. inducing rooting in stem cuttings

D. producton of disease resistant varieties

Answer: B

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48. Which of the following physiological effects is caused in plants by gibberellic acid ?

A. Shortening of internodes

B. Maleness in plants

C. Femaleness in plants

D. Chorophyll preservation

Answer: B

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

A. rate of cell division

B. production of hydrolysing enzymes

C. synthesis of abscisic acid

D. absorption of water through hard seed coat

Answer: B

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50. Gibberellins do not cause

A. shortening of gentically tall plants

B. stimulation of seed germination

C. promotion of parthenocarpy

D. induction of α-amylase in barley

Answer: A

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51. Gibberellin application to a plant can induce the following

A. leaf fall

B. delay in senescene

C. elongation of shoot system

D. diversification of root system

Answer: C

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52. Seedless watermelons have been obtained through

A. triploidy

B. gibberellin application

C. haploidy

D. vegetative propagation

Answer: B

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53. Which one does not affect apical dominance ?

A. IAA

B. IBA

C. Gibberellins

D. Indole - acetaldehyde

Answer: C

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54. Which of the following hormone is concerned with malting?

A. IBA

B. ABA

C. GA_3

D. CK

Answer: C

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55. To increase sugar production in sugarcanes, they are sprayed with

A. IAA

B. cytokinin

C. gibberellin

D. ethylene

Answer: C

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56. Antigibberellin is

A. pomalin

B. plastoquinone

C. IAA

D. phosphaon-D

Answer: D

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57. The cytokinins, besides C, H, O contain

A. nitrogen

B. nitrogen and sulphur

C. nitrogen and phosphorus

D. All of these

Answer: A

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58. Biosynthesis of cytokinin takes place via

A. citric acid cycle

B. mevalonic acid pathway

C. glyoxylate cycle

D. Calvin cycle

Answer: B

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59. 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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60. Coconut milk contains

A. ABA

B. auxin

C. cytokinin

D. gibberellin

Answer: C

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61. When a plant is not reproducing, most of its cytokinins are produced in its

A. leaves

B. lateral buds

C. shoot apex

D. roots

Answer: D

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62. Hormone discovered through tissue culture technique is

A. Auxin

B. Abscisic acid

C. Cytokinin

D. Gibberellin

Answer: C

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63. Which of the following is not a bioassary for cytokinins?

A. Chorophyll preservation test

B. Dwarf maize test

C. Seed germination test

D. Cell enlargement test

Answer: B

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64. A non - purine compound showing cytokinin activity is

A. zeatin

B. dihydrozeatin

C. benzimidazole

D. None of these

Answer: C

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65. The senescence of detached leaves can be delayed by the application of

A. IAA

B. NAA

C. 2, 4-D

D. Cytokinin

Answer: D

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66. The excised leaves of barely remain green for a longer period in cytokinin substituted medium due to delay in the destruction of

A. chlorophyll

B. chlorophyll and protiens

C. nucleic acids

D. All of these

Answer: D

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67. The effect of apical dominance can be overcome by which of the following hormone ?

A. IAA

B. Ethylene

C. Gibberellin

D. Cytokinin

Answer: D

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68. Richmond-Lang effect is shown by

A. auxin

B. gibberellins

C. cytokinin

D. sugars

Answer: C

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69. A plant hormone used for inducing morphogensis in plant tissue culture is

A. abscisic acid

B. gibberellins

C. cytokinins

D. ethylene

Answer: C

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70. Hormone that has negative effect on apical dominance is

A. cytokinin

B. gibberellin

C. auxin

D. Both (b) and (c)

Answer: A

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71. The hormone which promotes flowering in long day conditions and controls sex expression is

A. auxins

B. cytokinins

C. gibberellins

D. ethylene

Answer: B

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72. Cut or excised leaves remain green for long if induced to root of dipped in

A. gibberellins

B. cytokinins

C. auxins

D. ethylene

Answer: B

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73. Which amongst the following is a natural growth inhibitor

A. NAA

B. Ethylene

C. 2, 4-D

D. Benzaldehyde

Answer: B

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74. The metabolic precursor for the synthesis of ethylene is

A. citric acid

B. α- ketoglutaric acid

C. methionine

D. succinic acid

Answer: C

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75. Apples are generally wrapped in waxed paper to

A. prevent sunlight from changing its colour

B. prevent aerobic respiration by checking the entry of ethylene hormone

C. prevent ethylene formation due to injury

D. make the apples look attractive

Answer: B

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76. The phenomenon of climacteric respiration in a ripening fruit refers to

A. drop in the rate of respiration

B. rise and fall in the rate of respiration

C. fall and rise in the rate of respiration

D. survival without respiration

Answer: C

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77. The basipetal and lateral transport of auxins is inhibited by

A. gibberellins

B. ethylene

C. ABA

D. zeatin

Answer: B

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78. Ethylene is connected with

A. aerobic respiration

B. clumacteric respiration

C. anarobic respiration

D. fermentation

Answer: B

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79. Which one o f the following plant hormone (phytomone) Is know as a stress hormone

A. Gibberellin

B. Kintetin

C. Auxin

D. ABA

Answer: D

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80. Indentify the statement which is incorrect about seed dormancy.

A. It is the inactive state of seed

B. During the state of seed dormancy the growth of the cmbryo remains suspended

C. The embryo growth can resume on return of favourable conditions

D. Seed dormancy may be induced by short chain fatty acids

Answer: C

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81. Indentify the statement which is incorrect about scarification of seed coat to break seed dormancy.

A. It is a method of making seed coat soft and weak

B. Scarification process entails treatment with acids and alcohols

C. Mechanically, scarification is done using knives

D. It also involves removal of germination inhibitors by oxidation

Answer: D

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82. The flowering in Ribes nigrum can be induced by

A. auxin

B. gibberellins

C. ABA

D. ethylene

Answer: C

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83. Increased availability of abscisic acid stimulates

A. lipid formation

B. protein formation in cell

C. starch synthesis in guard cells

D. cellulose synthesis

Answer: C

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84. ABA acts antagonistic to

A. ethylene

B. cytokinin

C. gibberellic acid

D. IAA

Answer: C

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85. Phenolic inhibitors occur in plants as

A. glycosides

B. turpenols

C. indoles

D. phospholipids

Answer: A

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86. Pomalin is used to enlarge fruits of

A. apple

B. tomato

C. chillies

D. pomegranate

Answer: A

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87. Seed dormancy can be broken by

A. ABA and ethylene

B. auxin and gibberellin

C. gibberellin and cytokinin

D. auxin and ABA

Answer: C

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88. The flowering respones of plants can be changed by

A. inducing mutations

B. changing photoperiod

C. injection of enzymes

D. somatic hybridisation

Answer: B

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89. 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 temerature

C. mainly, the food material available in the soil

D. the O_2 present in the air

Answer: A

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90. In short-day plants, flowering is induced by

A. long nights

B. photoperiods less than 12 h

C. photoperiods shorter than intial value and uninterrupted long night

D. short photoperiods and interrupted long nights

Answer: C

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91. When the dark period of short day plants is intrrupted by a brief exposure of light, then the plant

A. will not flower at all

B. flowers immediately

C. gives more flowers

D. turns into a long-day plant

Answer: A

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92. Plants which daily require shorter period of darkness for flowering are called

A. short - day plants

B. long- day plants

C. normal -day plants

D. epidermal plants

Answer: B

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93. If a plant produces flower on exposure to alternating exposures of 4 h light 2 h dark in a 24 h cycle, it should be a

A. short -day plant

B. short -long day plant

C. long -short day plant

D. long-day plant

Answer: D

94. In short day plants, flowering is inhibited by

A. interruption of dark by white or red light

B. dark interrpution by far-red light

C. dark interruption by red light followed by far- red light

D. not possible

Answer: A

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95. The long-day plants require

A. equal amounts of P_r and P_{fr}

B. high ratio of P_r to P_{fr}

C. high ratio of P_{fr} to P_r

D. Only P_{fr}

Answer: C

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

A. red light

B. light more than critical day length

C. light equal to critical day length

D. light less than critical day length

Answer: B

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97. Types of plants that come to flower after exposure to short photoperiods followed by long photoperiods

A. intermediate plants

B. day-neutral plants

C. SLDP

D. LSDP

Answer: C

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98. If a short-day plant is grown under conditions of long nights and short - days and

the period is interrupted in the middle by a brief exposure to darkness, the plant will

A. wilt

B. flower

C. fail to flower

D. die

Answer: C

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99. If a long-day plant is grown under conditions of long nights and short - days and dark period interrupted in the middle by a brief exposure to red light, the plant will

A. wilt

B. flower

C. drops its floral buds

D. die

Answer: B

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100. The region of the spectrum, which does not cause photoperiodic induction is

A. blue region

B. red region

C. green region

D. far-red region

Answer: C

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101. Photoperiodic stimulus is picked up by

A. phytohormones

B. stomata

C. phytochrome

D. enzymes

Answer: C

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102. What is true about phytochrome ?

A. P_r absorbs red light and becomes P_{fr}

B. P_r absorbs yellow light and becomes P_{fr}

C. P_{fr} absorbs yellow light and becomes P_r

D. P_{fr} absorbs red light and becomes P_r

Answer: A

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103. The form of phytochrome that promotes the germination of seeds of some species ?

A. P_{fr} form

B. P_r forms

C. Both (a) and (b)

D. None of these

Answer: A

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104. Phytochrome was isolated by

A. Butler et. al.

B. W Went

C. R Hill

D. Borthwick et. al.

Answer: A

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105. In the long dark phase

A. P_{fr} form remains unchanged

B. only $50\ \%$ P_{fr} changes to P_r

C. P_{fr} changes to P_r

D. change from P_{fr} to P_r occurs after flowering

Answer: C

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106. Red far-red reversible photoreaction was first observed by

A. Butler

B. Garner

C. Allard

D. Borthurck

Answer: A

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107. Phytochrome is a

A. chemicals regulating flowering

B. chemicals regulating growth from seed to adulthood

C. hormones regulating growth from seed to adulthood

D. regulators synthesised by plants and influencing physiological process

Answer: A

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108. The seat of synthesis and seat of action of 'florigen' is

A. root and leaf respectively

B. root and shoot tip, respectively

C. leaf and shoot tip, respectively

D. storage tissues

Answer: C

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109. Devernalisation can be done by

A. dry air

B. heat treatment

C. red light exposure

D. chilling treatment

Answer: B

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110. In annuals, the site of vernalisation is the

A. root

B. seed

C. hypocotyl

D. flower bud

Answer: B

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111. Vernalisation treatment can be given to partially germinated seeds in one of the following plants.

A. Wheat

B. Rye

C. Rice

D. Cotton

Answer: A

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112. The term 'Vernalin' was coined by

A. Lysenko

B. Chourad

C. Purvis

D. Melcher

Answer: D

View Text Solution

113. The perception of stimulus of cold treatment vernalisation is received by

A. leaves

B. shoot apex

C. axillary buds

D. stem

Answer: B

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114. In Oenothera, the chilling treatment is given to

A. plant with Ist pair of leaves

B. plant with 6-8 leaves

C. germinated seeds

D. shoot apex of a mature plant

Answer: B

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115. The biological clock measures the length at each night by the

A. relative amount of red-absorbing and far-red absorbing phytochrome present at dawn

B. amount of far-red absorbing phytochrome at dusk

C. relative amount of red-absorbing and far red-absorbing phytochrome at mid day

D. rate at which one kind of phytochrome is converted to the other

Answer: A

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116. Pick up the correct match pair.

A. Xanthium - Long-day plant

B. Sunflower - Short-day plant

C. Wheat - Short-day plant

D. Tomato - Day-neutral plant

Answer: D

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117. Which one of the following statements is true for the phytochromes ?

A. Phytochrome is a phytohormone

B. Phytochrome is a photosynthetic pigment

C. Phytochrome is a pigment that controls growth, photomorphogenesis and development of many plants

D. Phytochrome regulates dark-dependent developmental processes

Answer: C

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118. The term synergistic action of hormones refers to

A. when two hormones act together, but bring about opposite effects

B. when two hormones act together and contribute to the same function

C. when one hormone affects more than one function

D. when many hormones bring about any one function

Answer: B

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119. When an unripe banana is sealed in a polythene bag, it reamins green for many days. But if an apple is also sealed in the same bag. The banana ripens and turns yellow within a few days. The reason is that apple

A. removes CO_2, which inhibits fruit ripening

B. removes CO_2 released from green bananas

C. produces CO_2, which activates fruit ripening

D. produces ethylene, which induces fruit ripening

Answer: D

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120. In the 1940s, Johannes van Overbeek stimulated growth in plant embryos with coconut milk. In the 1950s, Folke Skoog and Carlos O Miller stimulated cell division in tobacco plants with degraded DNA. The active ingredient in both stimulants, which was a modified

A. adenine

B. auxin

C. ribosic acid

D. phosphate

Answer: A

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121. Arrange the following in the manner of decreasing auxin activity

A. IAA $\rightarrow$ IBA $\rightarrow$ IPA

B. IPA $\rightarrow$ IBA $\rightarrow$ IAA

C. IAA $\rightarrow$ IPA $\rightarrow$ IBA

D. IBA $\rightarrow$ IPA $\rightarrow$ IAA

Answer: D

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122. In the early part of this century, the Danish botanist Peter Boysen-Jensen and the Hungarian botanist Arpad Paal showed that the bending of a grass seedling towards light is caused by a

A. a diffusible chemical

B. a flow of ions

C. a neural impulse

D. an electrical gradient

Answer: A

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123. Mark the correct statements with respect to growth phases occuring in plants

I. In meristematic phase respiratory rate is higher.

II. Elongation phase imparts specialisation to matured cells.

III. Cells undergo dedifferentiation in maturation phase.

IV. Xylem and phloem will be formed from cells in maturation phase.

A. I and II

B. II, III and IV

C. I and IV.

D. I, III and IV

Answer: C

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124. Read the following statements given below

I. Permanent localised qualitative changes.

II. Regaining division ability.

III. Modification of development by plant.

IV. Loosing the ability to divide.

The above statements relates to

A. I-Plasticity, II-Dedifferentiation, III-Differentiation, IV-Redifferentiation

B. I-Differentiation, II-Dedifferentiation, III-Plasticity, IV-Redifferentiation

C. I-Redifferentiation, II-Differentiation, III-Plasticity, IV-Development

D. I-Lag phase, II-Log phase, III-Plasticity, IV-Expotential phase

Answer: B

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125. Phenyl acetic acid, 2, 4-dichlorophenoxy acetic acid, Ethaphon, Indole-3-butyric acid, Indole-3-acetic acid.

The naturally occuring auxins from these are given in the table are

A. Phenyl acetic acid, Indole-3-butyric acid, Indole-3-acetic acid

B. 2-4 dichlorophenoxy acetic acid, Ethapon and Indole-3-butyric acid

C. Phenyl acetic acid and ethaphon

D. Ethaphon and Indole-3-acetic acid

Answer: A

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126. Identify the correct matches associated with plant hormones w.r.t. their action,

A. Growth promoters - Abscisic acid

cytokinin

Growth inhibitors - Elhylene and auxin

B. Growth promoters - Auxin, cytokinin and gibberellin

Growth inhibitors - Abscisic acid and ethylene

C. Growth promoters - Auxin and ethylene

Growth inhibitors - Cytokenin and abscisic acid

D. Growth promotes - Auxin and cytokenin

Growth inhibitors - Gibberellins, abscisic acid and ethylene

Answer: B

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127. Identify the correct matches w.r.t. to plant hormones and then bioassays.

A. Avena curvature test - Cytokinin

B. Growth Inhibition test - Gibberellins

C. Triple response test - Ethylene

D. Barley endosperm test - Abscisic Acid

Answer: C

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128. Read the following statements and select the right choice.

A. Short day plants require light period more than critical length

B. Day neutral plants are independent of photoperiod

C. Short long day plants require long days for floral initiation

D. Long day plants do flower only during long night periods

Answer: B

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129. Given below are the accuses of seed dormancy and methods of breaking it. Identify the incorrect match.

A. Impermeable seed coat - Hydrolytic enzymes

B. Immature seeds - Stratification

C. Mechanically resistant - Microbial action

D. Chemical substances like ABA - Growth hormones

Answer: C

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130. How many of the given extrinsic factors affect the growth of plant ?

light, genetic factors, auxin, minerals, nutrients, water, oxygen, soil, temperature, plasticity

A. Four

B. Five

C. Six

D. Three

Answer: C

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131. Which of the following combination is incorrect ?

A. Cell elongation - Auxin

B. Subsitute of cold treatment - Ethylene

C. Apogeotropism - Ethylene

D. Lateral-bud development in dicots - Cytokinin

Answer: B

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132. Fill in the blanks and select the correct option with respect to growth hormones.

I. ...A... is a liquid from which ethylene gas is released.

II. Cytokinins favor ...B... transport.

III. Agent orange is ...C... .

A. A-2, 4, 5-T, B-xylem, C-gibberellin

B. A-Ethaphon, B-phloem, C-2, 4, 5-T

C. A-Ethaphon, B-xylem, C-2, 4, 5-T

D. A-Cytokinin, B-phloem, c-gibberellin

Answer: B

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133. Which one of the plant growth regulator will we use in following causes given below ?

I. Bolt a rosette plant

II. Enhance senescence

III. Flowering in a plant

A. I-Auxin, II-Cytokinin, III-Ethylene

B. I-Gibberellins, II-Abscisic acid, III-Cytokinin

C. I-Gibberellins, II-Abscisic acid, III-Auxin

D. I-Auxin, II-Cytokinin, III-Gibberellins

Answer: C

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134. The developmental stages in a plant are as follows

A. Division $\rightarrow$ Differentiation $\rightarrow$ Maturation $\rightarrow$ Senescence $\rightarrow$ Death

B. Division $\rightarrow$ Maturation $\rightarrow$ Differentiation $\rightarrow$ Expansion $\rightarrow$ Death

C. Division $\rightarrow$ Differentiation $\rightarrow$ Expansion $\rightarrow$ Maturation $\rightarrow$

Senescence $\rightarrow$ Death

D. Division $\rightarrow$ Expansion $\rightarrow$ Differentiation $\rightarrow$ Maturation $\rightarrow$ Senesccence $\rightarrow$ Death

Answer: A

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135. Read the given statements regarding effects of gibberellins in plants.

I. Shortening of internodes

II. Chlorophyll preservation

III. Maleness in plants

IV. Early growth for faster maturity.

A. I, II and V

B. III and IV

C. II, III and IV

D. I, III and V

Answer: B

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136. I. Hastening the ripening of fruits.

II. Synthesis of carotenoids.

Select the option of set of hormones suitable for above functions in plants

A. I-Abscisic, II-Zeatin

B. I-Zeatin, II-Ethylene

C. I-Ethylene, II-Zeatin

D. I-Ethylene, II-Abscisic acid

Answer: D

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137. Read the following statements

I. Florigens are associated with flowering in plants.

II. Phytochromes become active in green light.

III. Plant hormones are growth inhibitors.

IV. α-amylase test is a biossay of GA.

Identify the true and false statement from above.

A. True: I, II and III; False: IV

B. True: I and IV; False: II and III

C. True False
II and III I and IV

D. True False
Only I II, III and IV

Answer: B

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138. Secondary cortex $\xrightarrow[\text{phloem}]{\text{Xylem}}$ Secondary ltbbrgt Phellem, Phellogen

Which options are the odd ones associated with development from process of redifferentiation.

A. Secondary cortex and xylem

B. Secondary phloem and phellem

C. Secondary cortex and secondary phloem

D. Phellem and phellogen

Answer: C

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139. Stem growth, Fruit growth, Bolting, Increased mass yield, Seed germination, Overcome apical dominance,

From the above given statements how many are the uses of gibberellins.

A. Three

B. Four

C. Six

D. Five

Answer: A

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140. Identify the correct match

A. GA_4 - Gibberella

B. GA_5- Coconut milk

C. GA_3- Oat coleoptiles

D. GA_4- Tobacco

Answer: A

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141. Growth hormones such as ...A... and ...B... are used in diluted form to produce parthenocarpic fruits, e.g. ...C... Identify A, B and C.

A. $\begin{matrix} A & B & C \\ \text{auxin} & \text{cytokinin} & \text{tomatoes} \end{matrix}$

B. $\begin{matrix} A & B & C \\ \text{cytokinin} & \text{auxin} & \text{tomatoes} \end{matrix}$

C. $\begin{matrix} A & B & C \\ \text{kinentin} & \text{zeatin} & \text{tomatoes} \end{matrix}$

D. $\begin{matrix} A & B & C \\ \text{IAA} & \text{IBA} & \text{tomatoes} \end{matrix}$

Answer: D

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142. Which of the given plant shows plasticity in response to its prevailing environment?

A. Coriander and sunflower

B. Laskspur, buttercup and coriander

C. Buttercup and coriander

D. Larkspur and buttercup

Answer: B

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143. Select a method of breaking seed dormancy in which after ripening treatment is given at low temperature $(0 - 10^{\circ} C)$ in the presence of O_2.

A. Scarification

B. Stratification

C. Vernalisation

D. Chemical treatment

Answer: B

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Chapter Exercises Medical Entrances Special Format Questions Statement Based

1. The sigmoid curve shows

I. the lag phase

II. The senescence phase

III. The exponential growth phase

IV. The maturation phase

A. I, II and III

B. I and III

C. Only II

D. II and IV

Answer: B

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2. Which of the following functions are concerned with the growth hormone auxin ?

I. Promotion of chloroplast development

II. Cell elongation

III. Control of stomatal closure

IV. Apical dominance

A. Only II

B. II and IV

C. Only III

D. I and III

Answer: B

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3. Abscisic acid

I. induces dormancy

II. Induce cell elongation

III. Provides defence against salt and cold stresses

IV. Inhibits abscission

Choose the correct option.

A. Only I

B. I and II

C. Only IV

D. I and III

Answer: D

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4. Which of the following are short-day plants ?

I. Chrysanthemum

II. Dahlia

III. Spinacea

IV. Beta vulgaris

Choose the incorrect option.

A. I and II

B. III and IV

C. Only I

D. Only III

Answer: A

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5. The conditions necessary for vernalisation are

I. high temperature

II. Low temperature

III. Carbon dioxide

IV. oxygen and water

Choose the correct option.

A. Only I

B. I and II

C. II and IV

D. Only I

Answer: C

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6. The process of senescence in plants involves

I. decrease in nucleic acid and protein contents.

II. Reduced photosynthetic and storage activity.

III. Breakdown of photosynthetic pigments.

IV. Increased mitochondrial activity.

A. I, II and III

B. I and II

C. II and IV

D. Only II

Answer: A

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7. Study the following statements.

I. Ethylene and ABA hormones accelerate the process of senescence.

II. Zeatin is physiologically active cytokinins is maize kernels.

III. Arginine is precursor for auxin biosynthesis.

IV. Auxin induces cell division.

Choose the correct option.

A. I and II

B. II and III

C. III and IV

D. I, II, III and IV

Answer: A

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8. Hormone group responsible for breaking see dormancy 1. ABA 2. Cytokinin 3. Auxin 4. Gibberellin

A. I and III

B. I, II and IV

C. II, III and IV

D. I, II and III

Answer: C

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Chapter Exercises Medical Entrances Special Format Questions Assertion Reason

1. Assertion The shoot apical meristems are the only source of auxin synthesis.

Reason Dormancy of lateral buds over apical buds is due to auxin.

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

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

C. Assertion is true, but Reason is true

D. Both Assertion and Reason are false

Answer:

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2. Assertion Hormones are also called growth adjusters.

Reason Hormones promote or inhibit plant growth.

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

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

C. Assertion is true, but Reason is true

D. Assertion is false, but Reason is true

Answer: A

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3. Read the given statements and select the correct option.

Statement 1: Ethylene is a gaseous hormone.

Statement 2: Ethylene causes climacteric ripening of fruits.

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

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

Assertion

C. Assertion is true, but Reason is true

D. Assertion is false, but Reason is true

Answer: B

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4. Assertion In maryland mammoth, flowering occurred at different times at different latitude.

Reason Maryland mammoth is a tobacco variety.

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

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

C. Assertion is true, but Reason is true

D. Assertion is false, but Reason is true

Answer: B

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5. Assertion The term 'Night break' is applied to the occurrence of flowering during night period.

Reason Night break is helpful in flowering of short-day plants.

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

Assertion

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

C. Assertion is true, but Reason is true

D. Both Assertion and Reason are false

Answer:

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6. Assertion. Plants also have hormones called phyto-hormones. Reason. They increase the rate of reactions and thus always accelerate growth and other related changes

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

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

C. Assertion is true, but Reason is true

D. Both Assertion and Reason are false

Answer:

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7. Assertion: Photomodulation of flowering is phytochrome-regulated process.

Reason: Active form of phytochrome (Pfr) directly induces floral induction in shoot buds.

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

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

C. Assertion is true, but Reason is true

D. Assertion is false, but Reason is true

Answer: C

Chapter Exercises Medical Entrances Gallery

1. 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 gibberellin

B. Auxin and cytokinin

C. Auxin and abscisic acid

D. Gibberellin and abscisic acid

Answer: B

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2. Phytochrome is a

A. flavoprotein

B. glycoprotein

C. lipoprotein

D. chromoprotein

Answer: D

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3. The Avena curvature is used for bioassay of

A. GA_3

B. IAA

C. Ethylene

D. ABA

Answer: B

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4. Identify the correct pair of combination

(i) Zeatin - adenine derivative - overcoming apical dominance

(ii) C_2H_4 - indole compound - effective in fruit ripening

(iii) ABA - carotenoid derivative - induction of parthenocarpy

(iv) Ga_3 - terpene - bolting in cabbage

A. II and III

B. II and IV

C. I and IV

D. III and IV

Answer: C

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5. Assertion (A). Ethylene induces ripening

Reason (R). Ethylene is a gaseous hormone

A. A and R are true, R is the correct explanation of A

B. A and R are true but R is not the correct explanation

C. A is true, R is false

D. A is false, R is true

Answer: B

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6. One hormone hastens maturity period in juvenile conifers, a second hormone control xylem differentiation , while the third increases the tolerance of plants to various stresses they are respectively

A. Auxin, gibberellin, ABA

B. Gibberellin, auxin, ABA

C. Auxin, gibberellin, cytokinin

D. Gibberellin, auxin, cytokinin

Answer: B

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7. Which of the following statements regarding photoperiodism is false

A. The response of plants to periods of light/day is termed as photoperiodism

B. The shoot apices cannot perceive photoperiods

C. In day neutral plants there is no correlation between exposure to light

duration and induction of flowering response

D. The site of perception of light/dark duration is the flower

Answer:

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8. One hormone stimulates the closure of stomata and another one influences the swelling of the axis in dicot plants. They are

A. gibberellins and ethylene

B. abscisic acid and cytokinins

C. gibberellins and cytokinins

D. abscisic acid and ethylene

Answer:

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9. Which one is correct for blooming of short day plants

A. The long dark period is not critical

B. It is affected by interruption of long dark period by brief exposure of light

C. It is not affected by interruption of long dark period by brief exposure of light

D. It is affected if continuous light period is interrupted

Answer: A

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10. The hormone which reduces transpiration rate by inducing stomatal closure is

A. Ethylene

B. Gibberellin

C. ABA

D. Cytokinin

Answer: C

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11. Which of the following is a dicot weedicide

A. 2, 4-D

B. NAA

C. IBA

D. IAA

Answer: A

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12. A few normal seedlings of tomato were kept in a dark room. After few days, they were found to have become white-coloured like albinos. Which of the following terms will you use to describe them ?

A. Embolised

B. Etiolated

C. Defoliated

D. Mutated

Answer: B

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13. Which is not the effect of ethylene ?

A. Promotes senescence and abscission of plant organs

B. Breaks seed and bud dormancy

C. Brings about horizontal growth of seedlings

D. Helps to overcome apical dominance

Answer:

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14. Dr. F. Went noted that is 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 is basis of quantitative determination of small amounts of growth promoting substances

B. It supports the hypothesis that IAA is auxin

C. It demonstrated polar movement of auxins

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

Answer: D

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15. In flowering plants, the site of perception of light/dark duration is

A. stem

B. leaves

C. shoot apex

D. floral meristem

Answer: B

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16. If a plant produces flowers when exposed to alternating periods of 5 hours light and 3 hours dark in a 24-hour cycle, the plant should be

A. SDP

B. LDP

C. SLDP

D. DNP

Answer: B

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17. Spraying sugarcane crop with a plant hormone increases length of plants and increases yield by as much as 20 tonnes/acre. The hormone is

A. gibberellin

B. auxin

C. cytokinin

D. ABA

Answer: A

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18. Cells attaining their maximum size in terms of wall thickening and protoplasmic modifications belong to

A. meristematic phase

B. elongation phase

C. maturation phase

D. None of these

Answer: C

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19. During seed germination its stored food is mobilised by

A. ethylene

B. cytokinin

C. ABA

D. gibberellin

Answer: D

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20. Movement of tendrils in response to touch is known as

A. nyctinastism

B. thigmotropism

C. seismonatism

D. haptonastism

Answer: B

21. The phytohormone, which helps in germination of seed is

A. ABA

B. auxin

C. gibberellin

D. cytokinin

Answer: C

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22. Compare the statement A and B.

Statement A Ethylene is a gas, which acts as growth regulator of plants.

Statements B It is the most simple plant hormone.

A. Both the statements A and B are correct and B is the correct explanation of A

B. Both the statements A and B are correct and B is not the correct explanation of A

C. Statement A is correct and B is wrong

D. Statement A is wrong and B is correct

Answer: B

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23. Hormone replacing the requirement of vernalisation is

A. Ethylene

B. auxin

C. gibberellin

D. Cytokinin

Answer: C

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

A. IAA

B. GA

C. ABA

D. ethephon

Answer: B

Watch Video Solution

25. Apical dominance is caused by

A. auxin

B. cytokinin

C. ethylene

D. gibberellin

Answer: A

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26. Which of the following hormone promotes seed dormancy and bud dormancy?

A. Auxin

B. GA

C. Cytokinin

D. ABA

Answer: D

Watch Video Solution

27. A plant hormone used for inducing morphogensis in plant tissue culture is

A. ethylene

B. gibberellin

C. cytokinin

D. abscisic acid

Answer: C

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28. The pigment sensitive for red and far-red light is

A. chlorophyll

B. phytochrome

C. cytochrome

D. carotene

Answer: B

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29. Fluorine ring is a feature of

A. GA

B. ethylene

C. morphactines

D. None of these

Answer: C

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

A. indole acetic acid

B. cytokinins

C. gibberellins

D. ethylene

Answer: C

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31. Day neutral plant relates to

A. loss of activity during day time

B. overactive during day time

C. flowering in all possible photoperiod

D. no flowering in any photoperiod

Answer: C

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32. 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. Both (a) and (b)

Answer: D

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33. Bolting may be induced by

A. gibberellins

B. ABA

C. auxin

D. cytokinin

Answer: A

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

A. Adenine derivative - Kinetin

B. Carotenoid derivative - ABA

C. Terpenes - IAA

D. Indole compounds - IBA

Answer: C

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35. Photoperiodism was first characterized in

A. tobacco

B. potato

C. tomato

D. cotton

Answer: A

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36. Phototropic curvature is result of uneven distribution of

A. gibberellin

B. phytochrome

C. cytokinins

D. auxin

Answer: D

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37. Which one of the following synthetic growth regulators is used to promote synchronized flowering in pineapple

A. Indole butyric acid

B. Phenyl mercuric acetate

C. Benzyl aminopurine

D. 2-Chloroethyl phosphonic acid

Answer: D

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38. One of the commonly used plant growth hormone in tea plantation is

A. Zeatin

B. ABA

C. IAA

D. Ethylene

Answer: C

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39. Which one the following plant function is not generally governed or controlled by auxin

A. Apical dominance

B. Photosynthesis

C. Photoperiodism

D. Growth

Answer: B

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40. Response of plants due to reversibole turgor change in pulvinus as a result of touch is

A. photonasty

B. thermonasty

C. siesmonasty

D. chemonasty

Answer: C

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41. One of the synthetic auxin is

A. NAA

B. IAA

C. GA

D. IBA

Answer: A

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42. Which of the PGR induces parthenocarpy in tomatoes ?

A. Auxin

B. Gibberellin

C. Cytokinin

D. Ethylene

Answer: C

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

A. 2, 4-D

B. IAA

C. GA

D. ABA

Answer: A

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44. Statement a. Auxins promote apical dominance by suppressing activity of lateral buds.

Statement b. In Horicultrue, periodic pruning of shoot tips is done to make Mulberry plants bushy.

A. Both the statements A and B are correct and A is the reason for B

B. Both the statements A and B are correct and A is not the reason for B

C. Statement A is correct and B is wrong

D. Statement A is wrong and B is correct

Answer: A

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45. Which pigment is involved in photoperiodie changes in plants ?

A. Phytochrome

B. Cytochrome

C. Chlorophyll

D. Anthocyanin

Answer: A

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

A. wilting

B. abscission

C. plasmolysis

D. senescence

Answer: D

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47. Sprouting of potato under storage condition can be prevented by

A. auxin

B. gibberellin

C. ethylene

D. cytokinin

Answer: A

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48. The plant hormone produced by Rhizobium for nodulation is

A. IBA

B. NAA

C. 2, 4-D

D. IAA

Answer: D

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49. Which of the following is a day neutral plant ?

A. Helianthus annuus

B. Euphorbia pulcherrima

C. Avena sativa

D. Beta vulgaris

Answer: A

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50. Which of the following is the effect of a plant hormone, which is synthesised more in absence of light ?

A. Inhibits the development of seedless fruits

B. Responsible for closing of stomata

C. Induces the dormancy of seeds

D. Length of internodes increases

Answer: D

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51. Which one of the following inhibits seed germination for a particular period ?

A. Light

B. Water

C. Carbon dioxide

D. Dormancy

Answer: D

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52. The ripening of fruits can be hastened by treatment with

A. gibberellins

B. cytokinins

C. ethylene gas

D. auxin

Answer: C

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53. Identify two physiological process induced by two different phytoharmones having a common precurer which is formed due to the catlytic activity of pyruvic dehydrogenous complex

(I) More female flowers in cucumber

(II) α-amylase production in barely grain

Acceleration of fruit ripening in tomato

(IV) Delay in sprouting of potato tubers

The correct combination is

A. I and II

B. I and III

C. II and IV

D. III and IV

Answer: D

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54. How does pruning help in making the hedge dense

A. It induces the differentiation of new shoots from the rootstock

B. It frees axillary buds from apical dominance

C. The apical shoot grows faster after pruning

D. It releases wound hormones

Answer: B

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55. 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. Long-day

B. Darkness neutral

C. Day-neutral

D. Short-day

Answer: D

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56. Abscisic acid is primarily synthesised in

A. lysosomes

B. Golgi complex

C. chloroplast

D. ribosomes

Answer: C

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

A. vessels and tracheid differentiation

B. leaf abscission

C. annual plants

D. floral parts

Answer: B

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58. Maximum growth rate occur in

A. stationary phase

B. senescent phase

C. lag phase

D. exponential phase

Answer: D

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59. Growth promoting natural hormone is

A. IAA

B. Gibberellin

C. 2, 4-D

D. ABA

Answer: A

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60. Bakanae disease is caused by

A. fungus

B. alga

C. bacterium

D. virus

Answer: A

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61. Which of the following induces flowering in long-day plants ?

A. Gibberellin

B. Cytokinin

C. Auxin

D. Ethylene

Answer: A

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62. Leaf abscission is caused by

A. ABA

B. cytokinin

C. auxin

D. gibberellin

Answer: A

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63. The problem of necrosis and gradual senescence, while proforming tissue culture can be overcome by while proforming tissue culture can be overcome by

A. spraying auxins

B. spraying cytokinins

C. suspension culture

D. sub-culture

Answer: D

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

A. gibberellins

B. phycobilins

C. auxins

D. cytokinins

Answer: A

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65. 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

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66. Pick out the correct statements

(A) Cytokinis specially help in delaying senescence

(B) Auxine are involved in regulating apical dominance

(C) Ethylene is especially useful in enchancing seed germination.

(D) Gibberellins are respeonsible for immature falling of leaves

A. I and III

B. I and IV

C. III and II

D. I and II

Answer: D

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

A. Abscisic acid - Stomatal closure

B. Gibberellic acid - Leaf fall

C. Cytokinin - Cell division

D. IAA - Cell wall elongation

Answer: B

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68. Removal of apical (terminal) bud of a flowering plant (or pruning of a flowering plnat) leads to

A. formation of new apical buds

B. formation of adventitious roots on the cut side

C. early flowering (or stopping of floral growth)

D. promotion of lateral branches

Answer: D

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69. Choose the correct sequence of stages of growth curve for bacteria

A. lag, log, stationary, decline phase

B. lag, log, stationary phase

C. stationary, lag, log, decline phase

D. decline, lag, log phase

Answer: A

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

A. NAA

B. ABA

C. IAA

D. GA

Answer: B

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71. IAA is derived from or which of the following is involved in the synthesis of a plant hormone IAA ?

A. Tryptophan

B. Tyrosine

C. Phenylalanine

D. None of these

Answer: A

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72. Gibberellin causes

A. apical dominance

B. flowering

C. internodal growth

D. wilting

Answer: C

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73. Short day plant is

A. Xanthium

B. Pisum

C. Cucumis

D. Avena

Answer: A

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74. Phytochrome is present in

A. vascular crytogams

B. prokaryotes

C. flowering plants

D. algae

Answer: C

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75. The natural plant hormone isolated from cormn kernels and coconut milk is

A. florigen

B. GA_3

C. free auxins

D. indole acetic acid

Answer: D

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76. 6- furfuryl ammino purine 2, 4-dichorophenoxy 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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77. Seed dormancy is due to the : -

A. ethylene

B. abscisic acid

C. IAA

D. starch

Answer: B

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