BIOLOGY

BOOKS - TRUEMAN BIOLOGY

Plant Physiology

Assertion And Reason

1. [A]: Phytotron is a device by which photolysis of water is created.

[R]: Phytotron is a method of keeping plants in natural light and temperature in houses

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: D

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2. [A]: The driving force for passive absorption is non metabolic in origin.

[R]: The driving force for active absorption is energy derived from the metabolic pro- cesses.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: B

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3. [A]: The movement of ions from endodermis to xylem elements is an active process.

[R]: It requires the involvement of metabolic energy that comes from respiration.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: A

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4. [A]: The water molecules are held together from cells of leaf to root because of cohesive force.

[R]: Water does not ascend in the tissue due to transpiration pull.

A. 1)If both A and R are true and R is the correct explanation of A

B. 2)If both A and R are true but R is not the correct explanation of A

C. 3)If A is true and R is false

D. 4)If both A and R are false

Answer: C

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5. [A]: Passive absorption of a substance occurs from its lower to higher chemical potential across the membrane.

[R]: Active absorption occurs across a membrane from its higher to lower chemical potential i:e., along the concentration gradient

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: D

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6. [A]: Xylem transports sap from root to shoot.

[R]: Phloem translocates food.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: B

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7. [A]: Maximum transpiration occurs in meso-phytes than xerophytes.

[R]: In mesophytes stomata are found on both surfaces of leaves and guard cells show frequent movements

A. 1)If both A and R are true and R is the correct explanation of A

B. 2)If both A and R are true but R is not the correct explanation of A

C. 3)If A is true and R is false

D. 4)If both A and R are false

Answer: A

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8. Assertion : Thick cuticle is mostly present in disease resistant plants.

Reason : Disease causing agents cannot grow on cuticle and cannot invade the cuticle.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: B

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9. Assertion. Submerged plants get carbon dioxide in the form of carbonates and bicarbonates.

Reason. Stomata are not present in submerged plants

A. 1)If both A and R are true and R is the correct explanation of A

B. 2)If both A and R are true but R is not the correct explanation of A

C. 3)If A is true and R is false

D. 4)If both A and R are false

Answer: D

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10. [A]: Phloem is the main conducting tissue.

[R]: Phloem does the· function of conduction of water.

A. 1)If both A and R are true and R is the correct explanation of A

B. 2)If both A and R are true but R is not the correct explanation of A

C. 3)If A is true and R is false

D. 4)If both A and R are false

Answer: A

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11. [A]: Antitranspirants are used to retard tran- spiration.

[R]: AbA and PMA are not antitranspirants

A. 1)If both A and R are true and R is the correct explanation of A

B. 2)If both A and R are true but R is not the correct explanation of A

C. 3)If A is true and R is false

D. 4)If both A and R are false

Answer: C

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12. [A]: Rate of transpiration is high in low wind velocity.

[R]: Wind removes humid air from around the leaf due to which transpiration is high.

A. 1)If both A and R are true and R is the correct explanation of A

B. 2)If both A and R are true but R is not the correct explanation of A

C. 3)If A is true and R is false

D. 4)If both A and R are false

Answer: B

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13. [A]: The rate of transpiration is indirectly pro- portional to RH.

[R]: If the outer air is humid, it will reduce the

diffusion of water vapour from intercellular spaces of leaf to the outer atmosphere.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: A

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14. [A]: High pH in guard cells activate phosphorylase to convert starch into glucose 1-PO_4 .

[R]: Stomata open when pH is low

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: D

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15. [A]: Daily periodicity of stomata movement is not the characteristic of succulent plants.

[R]: In succulent plants stomata are closed at night and open during the day.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: D

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16. [A]: In Nepenthes, lamina is modified to cap- ture insects to get nitrogenous food.

[R]: The plant proteins are broken down to amino acids and then absorbed by plant.

A. 1)If both A and R are true and R is the correct explanation of A

B. 2)If both A and R are true but R is not the correct explanation of A

C. 3)If A is true and R is false

D. 4)If both A and R are false

Answer: A

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17. [A]: The downward· movement of minerals through soil is effected by quantity and pH of water.

[R]:. Water makes mineral ions available to roots. The lower the pH, greater the leaching power of water.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: A

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18. [A]: Auxins are found in large amounts in the apical Meristem of shoot.

[R]: Because the shoot is exposed to the sunlight.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: B

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19. [A]: In C_4 plants, CO_2 fixation occurs at three sites.

[R]: CO_2 is fixed in mesophyll cells, bundle sheeth cells and vascular cambium

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: D

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20. [A]: Oxidation of H_2O takes place during pho- tosynthesis.

[R]: Photosynthesis is an oxidation-reduction

process where H_2O is oxidised to O_2 and CO_2 is reduced to $(CH_2O)_n$.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: C

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21. [A]: The rate of photosynthesis is determined in terms of the rate of production either per unit mass of green tissue or per unit weight of total chlorophyll.

[R]: Amount of light, CO_2 supply and temperature are important internal factors 'that directly affect the photosynthesis.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: C

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22. [A]: The energy capturing part of photosynthesis occurs in thylakoid membranes and can not proceed without

solar energy.

[R]: The synthesis part of photosynthesis occurs in the stroma and does not require direct light energy.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: B

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23. [A]: The light dependent reactions occur in thylakoids.

[R]: In thylakoids chlorophyll pigments are found to trap light.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: A

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24. [A]: Tropical movements occuring in response to water stimulus are called Haptotropism.

[R]: Haptotropic movement occurs in response to vibrations

A. 1)If both A and R are true and R is the correct explanation of A

B. 2)If both A and R are true but R is not the correct explanation of A

C. 3)If A is true and R is false

D. 4)If both A and R are false

Answer: D

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25. [A]: The evolution of molecular oxygen is con- cerned with photosystem-1 (PS-I).

[R]: The photosystem-11 (PS-II) is not involved in the evolution of oxygen

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: D

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26. [A]: Hill and Bendall proposed Z-scheme and suggested that photosystems operate in series.

[R]: The light-dependent reactions require the participation of two light gathering units called PS-I and PS-I I.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: A

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27. [A]: Rhizobial aggregates have been observed at distinct sites on curled root hairs.

[R]: The infection thread is formed by a process of invagination of the hair cell walls in the region of curling

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: A

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28. [A]: Light is very important external factor of transpiration.

[R]: Light induces stomata! opening and darkness stomata! closure. Thus the rate of transpiration increases in light and de- creases in dark.

A. 1)If both A and R are true and R is the correct explanation of A

B. 2)If both A and R are true but R is not the correct explanation of A

C. 3)If A is true and R is false

D. 4)If both A and R are false

Answer: A

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29. [A]: Wax, resin and suberin coating on the surface of plant parts reduce the rate of transpiration.

[R]: These adaptations are found mostly in xerophytes.

A. 1)If both A and R are true and R is the correct explanation of A

B. 2)If both A and R are true but R is not the correct explanation of A

C. 3)If A is true and R is false

D. 4)If both A and R are false

Answer: B

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30. [A]: Gibberellic acid when added to isolated aleurone layer, induces alfa-amylase activity. It acts at gene level.

[R]: GA may act at the gene level or just activates the inactive enzyme or interact to remove enzyme inhibitor.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: A

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31. Assertion : Auxillary buds, in actively growing herbaceous plants, generally remain dormant

Reason :This is due to apical dominance which is under the influence of auxins

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: A

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32. Assertion : If you burn a plant , its nitrogen component is given off as ammonia and other gases .

Reason : Hydroponics does not allow plants to grow well if they are supplied with all the mineral nutrients they need.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: C

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33. [A]: Amino acids are converted into ammonia by a group bacteria called ammonifying bacteria.

[R]: The majority of plants, however, can not utilize ammonium compounds as a source of nitrogen

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: B

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34. [A]: Due to excessive use of fertilizers, the available water to the plants becomes hypotonic in relation to cell sap.

[R]: The water molecules, as a result, diffuse out of the cells due to endosmosis.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: D

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35. [A]: Vernalization is also called as yarovization.

[R]: In short day plants the dark period required is important

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: B

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36. [A]: Fundamental factor in the vernalization is low temperature.

[R]: Vernalization is ineffective in the absence of oxygen, water and adequate supplies of carbohydrates for respiratory processes.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: B

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37. [Aj: ABA plays an important role in plants during water stress and drought conditions.

[R]: Exogenously applied ABA promotes stomatal closing.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: B

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38. (A]: Cytokinins help in retention of cholorophyll and delayed senescence in leaves.

[R]: Cytokinins only stimulate root initiation

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: C

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39. [A]: The germination of lettuce seeds is stimulated by red light and inhibited by infra-red light.

[R]: Red light converts pr to active pfr form.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: A

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40. [A]: The far-red form of the phytochromes ab- sorb light at 740 nm.

[R]: The red form of phytochrome absorbs light at 660 nm

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: B

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41. [A]: Elongation and division of cells are promoted by gibberellins.

[R]: Gibberellins increase the formation of hydrolytic enzymes that release energy necessary for growth

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: A

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42. [A]: Senescence effect can be reversed by cytokinin.

[R]: The loss of liquid from leaves of intact plant is termed as guttation.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: B

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43. [A]: Wilting occurs due to loss in turgidity.

[R]: Turgor pressure checks the excessive entry of water into cells.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: B

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44. [A]: Plasmolysis is seen by both living and dead cells.

[R]: Both types of cell are impermeable

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: D

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45. [A]: The water is absorbed by the root and moves into the stem.

[R]: From root hair cell, water directly moves to xylem cells

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: C

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46. [A]: Sulphur stabilizes protein structure.

[R]: It does not participate in metabolic processes

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: C

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47. [A]: Stomata remain open during day

[R]: Stomata help in gaseous exchange.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: B

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48. [A]: The nitrogen content of the plant cannot be detected accurately by ash analysis.

[R]: On burning of plant, nitrogen component is given off as NH_3 & other gases

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: A

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49. [A]: Submerged plants get CO_2 in the form of carbonates and bicarbonates.

[R]: Stomata are not present in submerged plants.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: B

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50. [A]: The evolution of molecular oxygen is con- cerned with photosystem-1 (PS-I).

[R]: The photosystem-11 (PS-II) is not involved in the evolution of oxygen

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: D

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51. [A]: Antitranspirants are used to retard tran- spiration.

[R]: AbA and PMA are not antitranspirants

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: C

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52. Assertion. Calcium deficiency symptoms first appear in the apical region.

Reason. Calcium is highly mobile in plants

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: B

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53. Assertion: Deficiency of sulpur causes chlorosis in plants

Reason : Sulphur is a constituent of chlorophyll, proteins and nucleic acids.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: C

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54. Assertion : Water and mineral uptake by root hairs from the soil occure through apoplast until it reaches endodermis

Reason : Casparian strips in endodermis are suberized.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: A

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55. [A]: Stomata open when guard cells have more H^+ .

[R]: Increased K^+ concentrations results in exo-osmosis in guard cells.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: D

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56. [A]: In washed beet root cylinders, betacyanin pigment does not come out when placed in cold water.

[R]: Because cell membrane is impermeable to betacyanin

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: A

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57. [A]: Rate of transpiration is directly proportional to relative humidity.

[R]: Humid air increases rate of diffusion.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: D

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58. [A]: Root cells have lower OP than leaf cells.

[R]: Root cells have higher solute concentration.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: D

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59. [A]: Root pressure is largely responsible for ascent of sap in harbaceous plants.

[R]: Root pressure develops due to DPD & is maintained by the living cells.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: B

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60. [A]: The nodulated bacteria fix nitrogen in the presence of leg Hb.

[R]: Leg Hb acts as oxygen scavanger

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: A

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61. [A]: Plants growing under trees show less photosynthesis.

[R]: Green light is least effective in photosynthesis.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: A

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62. [A]: Chlorophylls usually show red fluorescence though they absorb blue radiations as well.

[R]: In fluorescence, long wave radiations are emitted

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: A

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63. Asserion : Long distance flows of photoassimilates in plants occurs through seive tubes

Reason : Mature seive tubes have parietal cytoplasm and prforated seive plates

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: A

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64. [A]: Rhoeo discolor leaves contain anthocya-nin in epidermal cells

[R]: Anthocyanins are accessory photosyn-thetic pigments & trap solar radiations from surface

A. 1)If both A and R are true and R is the correct explanation of A

B. 2)If both A and R are true but R is not the correct explanation of A

C. 3)If A is true and R is false

D. 4)If both A and R are false

Answer: C

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65. [A]: Ringing/Girdling experiments involved removal of all tissues outside vascular cambium from a woody stem.

[R]: The upper & lower part of the plant is attached by central xylem & phloem.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: D

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66. [A]: Action spectra for photosynthesis help to identify the pigments involved.

[R]: Because these spectron often closely match the absorption spectra of the pigments that take part in photosynthesis

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: A

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67. [A] : $C_3 \& C_4$ cycle can not occur in the same plant

[R] : C_3 cycle is common in dicot & C_4 in monocots

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: D

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68. [A]: Photosynthesis is an oxidation reduction process.

[R]: Light reaction involves oxidation of water & dark reaction involves reduction of CO_2

A. 1)If both A and R are true and R is the correct explanation of A

B. 2)If both A and R are true but R is not the correct explanation of A

C. 3)If A is true and R is false

D. 4)If both A and R are false

Answer: A

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69. Assertion. Nitrogen deficiency induced purplish colouration in stems, petioles and lower leaf surfaces of some plants.

Reason. Purple colour appears due to accumulation of anthocyanin.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: A

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70. Assertion: C_4 photosynthetic pathway is more efficient than the C_3 pathway.

Reason : Photorespiration is suppressed in C_4 plants.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: A

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71. Assertion. The atmospheric concentration of CO_2 at which photosynthesis just compensates for resoiration is referred to as CO_2 compensation point.

Reason. CO_2-compensation point is reached

when the amount of CO_2 uptake is less than that generated through respiration because the level of CO_2 is more than that required for achieving CO_2-compensation point.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: C

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72. Assertion: Sigmoid growth curve consists of four parts.

Reason : Lag phase is called as grand phase of growth.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: C

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73. [A] : 2,4-D is a herbicide

[R] : It is not used during sowing of crops

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: B

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74. [A] : Nastic movements occur in the directions of stimuls

[R] : "Touch" response occur in Mimosa is an example of such movements

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: D

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75. [A] : Germinating seeds which store fats as reserve food material are very rich in glyoxysomes

[R] : Glyoxysomes are required for the conversion of fats into sugar to provide energy to the germinating

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: A

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76. [A] : Gibberellic acid , when added to isolated aleurone , induce amylase activity

[R] : The enzyme amylase converts insoluble starch into soluble sugars

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: B

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77. [A] : When apical bud is removed, the next axial bud begins to grow out.

[R]: High concentration of auxin in the apical bud suppresses the growth of next axial bud.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: A

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78. [A]: Xanthium will not flower if the long dark period is interrupted by a single brief flash of light.

[R]: Xanthium is a long day plant where continuous long light period as essential for flowering.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: C

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79. [A]: Senescence is induced by the application of cytokinin in plants.

[R]: Cytokinin promotes the breakdown of chlorophyll, proteins and nucleic acid.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: D

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80. Assertion : A correct concentration of auxin and cytokinin is required for the development of root and shoot in callus.

Reason: When the ratio of kinetin to auxin is

high only shoot develop but when the ratio is low only roots develop

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: A

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81. [A]: The endogenous level of plant hormones is measured by Bioassay technique.

[R]: The concentration of hormones in plants is so low that is not possible to chemically Estimate the level.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: A

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82. [A] : Bolting of rosette plants is caused by Gibberellins.

[R]: Gibberellins induce subaplcal meristem to develop taster

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: C

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83. (A]: Cytokinins help in retention of cholorophyll and delayed senescence in leaves.

[R]: Cytokinins only stimulate root initiation

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: C

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84. [A]: Plants hormones are called phytohormones

[R]: They increase rate of reaction & accelerate growth.

A. 1)If both A and R are true and R is the correct explanation of A

B. 2)If both A and R are true but R is not the correct explanation of A

C. 3)If A is true and R is false

D. 4)If both A and R are false

Answer: C

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85. [A] : Senescence occurs in all non meristematic cells.

[R]: Meristems are potentially immortal.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: A

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86. Assertion . Senescence is the time when age associated defects are manifested

Reason . Certain genes may be undergoing sequential switching on and off during one's life

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: A

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87. Assertion: Photosynthetically C_4 plants are less efficient than C_3 plants.

Reason: The operation of C_4 pathway requires the involvement of only bundle-sheath cells.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: D

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88. Assertion. The atmospheric concentration of CO_2 at which photosynthesis just compensates for respiration is referred to as CO_2 compensation point.

Reason. CO_2-compensation point is reached when the amount of CO_2 uptake is less than that generated through respiration because the level of CO_2 is more than that required for achieving CO_2-compensation point.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: C

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89. Assertion: C_4 photosynthetic pathway is more efficient than the C_3 pathway.

Reason : Photorespiration is suppressed in C_4 plants.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: A

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90. Assertion : Photomorphogenetic responses are controlled by the pigment cytochrome.

Reason :Cytochrome exists in two photoreversible forms

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: D

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91. [A] : Some plants flower only in summers & some only in winters.

[R]: Such plants require specific photoperiods tor flowering.

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

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

C. If A is true and R is false

D. If both A and R are false

Answer: A

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