BIOLOGY

BOOKS - CENGAGE BIOLOGY (ENGLISH)

MINERAL NUTRITION

Exercise

1. Which is not a criterion for the essentiality of a mineral?

A. Direct role in metabolism

B. Requirement is specific

C. Deficiency causes hunger signs

D. Dispensable for growth

Answer: D

Watch Video Solution

2. Essential elements are

A. Only macronutrients

B. Only micronutrients

C. Both macro and micronutrients

D. C, H, O and N only

Answer: C

Watch Video Solution

3. Which is not a trace element ?

A. Mn

B. Cu

C. Mo

D. K

Answer: D

Watch Video Solution

4. Which is not a true statement regarding macronutrients ?

A. Macronutrients form plant structure.

B. Macronutrients become toxic when present is excess.

C. Macronutrients have no role in electron transfer.

D. Macronutrients develop osmotic potential.

Answer: B

Watch Video Solution

5. Choose correct statement regarding micronutrients

A. Micronutrients become toxic in excess.

B. Micronutrients do not cause osmotic potential.

C. Micronutrients have little role in protoplasmic structure

D. Micronutrients play a secondary role in enzyme activation.

Answer: D

Watch Video Solution

6. Deficiency in plant growth and disorders caused by the reduced availability of a critical element is called

A. Critical deficiency

B. Secondary deficiency

C. Primary deficiency

D. Complete deficieny

Answer: C

Watch Video Solution

7. Who prescribed a medium containing microelements for the first time?

A. Gericke

B. Arnon Hoagland

C. Knop

D. Stout

Answer: B

Watch Video Solution

8. Excess of manganese may induce the deficiencies of

A. Iron

B. Calcium

C. Magnesium

D. All of these

Answer: D

Watch Video Solution

9. Partial mineral element is

A. N

B. P

C. K

D. S.

Answer: A

Watch Video Solution

10. Deficiency of which element causes deficiency of nitrogen

A. Mo

B. K

C. Mn

D. S

Answer: A

Watch Video Solution

11. Minerals associated with redox reaction are

A. N, Cu

B. Fe, Cu

C. Fe, K

D. Mn, Mo

Answer: B

Watch Video Solution

12. Minerals which maintain cation-anion balance in cells are

A. Cl,K

B. Fe, Cu

C. K,P

D. Ca, Fe

Answer: A

13. Interveinal chlorosis is due to the deficiency of

A. Fe

B. Mn

C. N

D. B

Answer: A

Watch Video Solution

14. Match columns I and II correctly.

	Mineral		Deficiency symptoms
(a)	Cu	(i)	Malformed leaves
(b)	Zn	(ii)	Grey spots leaves
(c)	Mn	(iii)	Splitting bark
(d)	B	(iv)	absence of root nodules

A. $(a) \rightarrow (iii), (b) \rightarrow (i), (c) \rightarrow (iv), (d) \rightarrow (ii)$

B. $(a) \rightarrow (iii), (b) \rightarrow (i), (c) \rightarrow (ii), (d) \rightarrow (iv)$

C. $(a) \rightarrow (iii), (b) \rightarrow (ii), (c) \rightarrow (iv), (d) \rightarrow (i)$

D. $(a) \rightarrow (i), (b) \rightarrow (ii), (c) \rightarrow (iii), (d) \rightarrow (iv)$

Answer: B

Watch Video Solution

15. Which of the following groups of elements are mobile ?

A. Fe, Ca, B

B. N, P, K

C. B, K, Ca

D. Ca and K

Answer: B

Watch Video Solution

16. Which of the following elements are required for chlorophyll synthesis?

A. Fe and Mg

B. Mo and Ca

C. Cu and Ca

D. Ca and K

Answer: A

Watch Video Solution

17. Which metal ion is a constituent of chlorophyll?

A. Magnesium

B. Maganese

C. Iron

D. Sulfur

Answer: A

Watch Video Solution

18. A sulphur containing amino acid is

A. Valine

B. Methionine

C. Tryptophan

D. Phenylalanine

Answer: B

Watch Video Solution

19. Copper deficiency leads to

A. Exanthema

B. Whiptail of cauliflower

C. Little leaf condition

D. Interveinal chlorosis

Answer: A

Watch Video Solution

Watch Video Solution

20. Phosphorus is found maximum in

A. Roots

B. Fruits

C. Flowers

D. None of these

Answer: B

Watch Video Solution

21. Which of the following is required for auxin synthesis?

A. Calcium

B. Zinc

C. Sugars

D. Proteins

Answer: B

Watch Video Solution

22. Reversible binding of cations, a property possessed by clay particle, is known as

A. Retentive capacity

B. Cation exchange

C. Adsorption

D. Chelation

Answer: B

Watch Video Solution

23. A characteristic of ion channels is/are

A. They are transmembrane proteins functioning as selective pores

B. They were discovered by Neher and Sakman

C. They are gated channels

D. All of these

Answer: D

Watch Video Solution

24. The theory of Donnan eqilibrium explains the presence of some

A. Fixed diffusible cations on the inner side

B. Fixed non-diffusible anions on the inner side

C. Non-fixed diffusible anions on the inner side

D. Non-fixed diffusible cations on the inner side

Answer: B

Watch Video Solution

25. Minerals are absorbed by the roots from the soil in the form of

A. Very dilute solution

B. Dilute solution

C. Concentrated solution

D. Very concentrated solution

Answer: A

Watch Video Solution

26. Movement of electrolytes through the roots is generally

A. Against the electrochemical gradient and requires energy.

B. Along the electrochemical gradient and does not require energy

C. A passive process

D. Dependent on aquaporins

Answer: A

Watch Video Solution

27. Ionic uptake against electrochemical gradient without the expenditure of metabolic energy can be explained by

A. Ion exchange

B. Donnan equilibrium

C. Carrier proteins

D. Both (1) and (2)

Answer: D

Watch Video Solution

28. Transpiration pull or water tension in leaf is responsible for which one of the following methods of absorption of minerals by the plants from soil?

A. Active absorption of minerals

B. Mass flow

C. Donnan eqilibrium

D. Ionic exchange

Answer: A

Watch Video Solution

29. If nitrogen is bubbled in the rooting medium, active absorption of minerals will

A. Increase

B. Decrease

C. Remain same

D. Stop immediately

Answer: B

Watch Video Solution

30. During ionic flux, uptake of ions into inner space is

A. Active

B. Passive

C. Energy dependent

D. Both (1) and (3)

Answer: D

Watch Video Solution

31. Carrier proteins for active salt uptake

A. Have pores

B. Form complex with ions

C. Function under transpiration pull

D. All of these

Answer: B

Watch Video Solution

32. The translocation of solute is

A. Equal to the rate of translocation of water

B. Dependent on transpiration pull

C. Through xylem vessel

D. All of these

Answer: D

Watch Video Solution

Watch Video Solution

33. Find odd one (w.r.t critical element)

A. Nitrogen

B. Potassium

C. Nickel

D. Phosphorus

Answer: C

Watch Video Solution

34. The process of conversion of $NH_4 \rightarrow NO_2 \rightarrow NO_3$ is called

A. Ammonification

B. Nitrification

C. N_2 fixation

D. Denitrification

Answer: B

Watch Video Solution

35. Which of the following is/are diazotrophs ?

A. Rhizobium and Azotobacter

B. Frankia and Klebsiella

C. Anbaena and Nostoc

D. All of these

Answer: D

Watch Video Solution

36. Which is not true for nitrogenase enzyme in root nodules in legumes?

A. Synthesized by nit genes of Rhizobium

B. Site of reduction of $N_2 \text{ into } NH_3$

C. It is a Mo-Fe protein

D. Resistant to O_2 concentration

Answer: B

Watch Video Solution

37. Cell division in root nodules is promoted by _____ secreted by plant and _____ secreted by bacteria.

A. Auxin, Cytokinin

B. Cytokinin, Auxin

C. Auxin, Leghemoglobin

D. Nitrogenase, Leg hemoglobin

Answer: A

Watch Video Solution

38. Conversion of $NO_3 \rightarrow NO_2 \rightarrow NH_3$ is called ___ and is catalysed by _____.

A. Nitrate assimilation, nitrate and nitrite reductase

B. Nitrification, nitrate and nitrite reductase

C. Ammonification, glutamate dehydrogenase

D. Denitrification, transaminase

Answer: A

Watch Video Solution

39. Transported and storage form of nitrogen in plants are

A. Amides

B. Polypeptides

C. Amino acids

D. α-ketogulatric acids

Answer: A

Watch Video Solution

40. The amino acid which plays a central role in nitrogen metabolism is/are

A. Glutamic acid

B. α-ketogulatric acid

C. Aspartic acid

D. Double aminated keto acids

Answer: A

Watch Video Solution

41. Leghemoglobin is found in which one of the following organisms ?

A. Anthoceros

B. Aulosira

C. Nostoc

D. Groundnut

Answer: D

Watch Video Solution

42. Nitrite reductase enzyme is used to convert

A. Nitrate into nitrite ion

B. Nitrogen of atmosphere into ammonia

C. Ammonia into nitrates

D. Nitrite to ammonium ion

Answer: D

Watch Video Solution

43. What do hemi parasites absorb from host ?

A. Water and minerals

B. Sugar

C. Both (1) and (3)

D. Nothing

Answer: A

Watch Video Solution

Watch Video Solution

44. A small rootless aquatic herb in which a portion of leaf foms a tiny sach or bladder which traps water insects is

A. Dionaea

B. Utricularia

C. Sarracenia

D. Drosera

Answer: B

Watch Video Solution

45. The process of conversion of NO_2, NO_3, NH_3 to N_2 is called _____ and is done by

A. Nitrification, Nitrosomonas

B. Denitrification, Pseudomonas

C. Nitrate assimilation, Nitrogenase

D. Ammonification, Bacillus

Answer: D

Watch Video Solution

46. Which one of the following ions is essential for photolysis of water?

A. Ca and Cl

B. Mn and Cl

C. Zn and I

D. Cu and Fe

Answer: B

Watch Video Solution

47. Which of the following is related with the transfer of food material?

A. Xylem

B. Collechyma

C. Phloem

D. Parenchyma

Answer: C

Watch Video Solution

48. Which of the following elements is most mobile in plant metabolism?

A. Calcium

B. Phosphorus

C. Carbon

D. Magnesium

Answer: B

Watch Video Solution

49. The process of converting ammonia to nitrate by bacteria is known as

A. Ammonification

B. Nitrification

C. Nitrogen fixation

D. Denitrification

Answer: B

Watch Video Solution

50. Root nodules which are present in plants are meant for fertilizers and are found in/on

A. Certain leguminous plants

B. Casuarina

C. Almus

D. All of the above

Answer: D

Watch Video Solution

51. Agriculturists have reported about 40-50 % higher yields of rice by applying

A. Azolla

B. Cyanophycean members

C. Mycorrhizae

D. Thorn forest

Answer: A

Watch Video Solution

52. A nutrient element essential for the formation of microtubules of the mitotic spindle apparatus during cell division is

A. Phosphorus

B. Sulfur

C. Calcium

D. Zinc

Answer: C

Watch Video Solution

53. The non-symbiotic N_2 fixer is

A. Anabaena

B. Rhizobium

C. Azotobactor

D. Azolla

Answer: C

Watch Video Solution

54. The N_2 -fixing bacterium associated with root nodules of legumes is known as

A. Azotobacter

B. Nitrobacter

C. Lactobacillus

D. Rhizobium

Answer: D

Watch Video Solution

55. The bacteria which converts nitrate in to molecular nitrogen is called

A. Nitrifying bacteria

B. Methanobacteria

C. Diazotrophic bacteria

D. Denitrifying bacteria

Answer: D

Watch Video Solution

56. The bacterium capable of anaerobic N_2 fixation is known as

A. Clostridium

B. Bacillus

C. Azotobacter

D. Rhizobium

Answer: D

Watch Video Solution

57. Which one of the following ions is essential for photolysis of water?

A. Nitrogen

B. Manganese

C. Carbon

D. Oxygen

Answer: B

Watch Video Solution

58. Which of the following can use molecular ni- trogen as nutrient

A. Rhizobium

B. Spirogyra

C. Mucor

D. Methancoccus

Answer: A

Watch Video Solution

59. Sinks are related to

A. Transport of organic solutes

B. Stomata

C. Enzymes

D. Phytochrome

Answer: A

Watch Video Solution

60. The translocation of solute is

A. Green leaves and storage organs

B. Root and stem

C. Xylem and phloem

D. Hormones and enzymes

Answer: A

Watch Video Solution

61. Which of the following is a biofertilizer?

A. Funaria

B. Fern

C. Anabaena

D. Fungus

Answer: C

Watch Video Solution

Watch Video Solution

62. Mo is related with

A. N_2 fixation

B. Flower induction

C. Chromosome contraction

D. Carbon collection

Answer: A

Watch Video Solution

63. Which one of the following elements is present in chlorophylls?

A. Manganese

B. Magnesium

C. Copper

D. Iron

Answer: B

Watch Video Solution

64. Which of the following bacteria has potential for nitrogen fixation?

A. Nitrosomonas

B. Nitrobacter

C. Nitrosococcus

D. Rhizobium

Answer: D

Watch Video Solution

65. For nitrogen fixation, the pigment useful is

A. Nitrogenase

B. Hemoglobin

C. Myoglobin

D. Leghemoglobin

Answer: D

Watch Video Solution

66. A symbiotic bacteria is

A. Rhizobium

B. Azotobacter

C. Clostridium

D. Streptomyces

Answer: A

Watch Video Solution

Watch Video Solution

67. The Ion involved in stomatal movement is:

A. Fe

B. Mg

C. Zn

D. K

Answer: D

Watch Video Solution

68. Which of the following is a nitrogen-fixing organism?

A. Some BGA

B. Rhizobium

C. Both (1) and (2)

D. Aspergillus

Answer: C

Watch Video Solution

69. Which of the following bacteria is involved in the two-step conversion of NH_3 into nitrate?

A. Azotobacter and Nitrosomonas

B. Nitrosomonas and Nitrobacter

C. Azotobacter and Achromobacter

D. Pseudomonas and Nitrobacter

Answer: B

Watch Video Solution

70. A metal ion involved in stomatal regulation is

A. Iron

B. Potassium

C. Zinc

D. Magnesium

Answer: B

Watch Video Solution

71. The plant ash is an indication of

A. Organic matter of plant

B. Waste product

C. Mineral salts absorbed by plants

D. None of these

Answer: C

Watch Video Solution

72. Plant ash has maximum content of

A. Mg

B. Fe

C. K

D. B

Answer: A

 Watch Video Solution

73. Which of the following is a part of cytochrome?

A. Mg

B. Zn

C. Fe

D. Ca

Answer: C

Watch Video Solution

74. Food in plants is translocated in the form of

A. Glucose

B. Starch

C. Sucrose

D. Fructose

Answer: C

Watch Video Solution

75. Which of the following is not related to N_2 fixation?

A. Rhizobium

B. Anabaena

C. Pseudomonas

D. Azotobacter

Answer: C

Watch Video Solution

76. Which of the following is not caused by deficiency of mineral?

A. Chlorosis

B. Etiolation

C. Shortening of internodes

D. Necrosis

Answer: B

Watch Video Solution

77. Which is essential for root hair growth?

A. Na

B. Ca

C. K

D. Mg

Answer: B

Watch Video Solution

78. What happens when we inoculate Rhizobium in wheat field?

A. No increase in production (nitrogen content of soil remains same)

B. A lot of increase in production (nitrogen content of soil increase)

C. Fertility of soil decreases

D. Fertility of soil increases

Answer: A

Watch Video Solution

79. Magnesium is found in

A. ChlorophyII

B. Carotenoid

C. Phycobilin

D. Cytochrome

Answer: A

Watch Video Solution

80. Which of the following is a trace element ?

A. S

B. Mg

C. Cu

D. P

Answer: C

Watch Video Solution

Watch Video Solution

81. Which one of the following organisms may respire in the absence of oxygen

A. Azotobacter

B. Clostridium

C. Rhizobium

D. Lactobacillus

Answer: B

Watch Video Solution

82. Which of the following is not a trace element?

A. Zn

B. Mn

C. Mg

D. Cu

Answer: C

Watch Video Solution

83. Symbiotic microorgainsm is

A. Clostridium

B. Azotobacter

C. Rhizobium

D. Chromatium

Answer: C

Watch Video Solution

84. Essential mineral nutrients are the elements

A. In the absence of which plants cannot complete their life cycle

B. Which cannot be replaced by other element in its function

C. Which are directly associated with the plant metabolism

D. All of the above

Answer: D

Watch Video Solution

85. Explain the stomatal movement based on kion-transport.

A. Na

B. Mg

C. K

D. P

Answer: C

Watch Video Solution

86. Which of the following enzymes fixes nitrogen?

A. Nitrate reductase

B. Nitrogenase

C. PEP carboxylase

D. RuBisCo

Answer: B

Watch Video Solution

Watch Video Solution

87. The bacterium capable of anaerobic N_2 fixation is known as

A. Azotobacter

B. Rhizobium

C. Bacillus

D. Clostridium

Answer: B

Watch Video Solution

88. In plant metabolism, phosphorus plays a major role to

A. Evolve oxygen during photosynthesis

B. Create aerobic condition

C. Generate metabolic energy

D. Evolve carbon dioxide during respiration

Answer: C

Watch Video Solution

89. Photosynthetic food material is transported in the form of

A. Glucose

B. Sucrose

C. Starch

D. Fructose

Answer: B

Watch Video Solution

90. Chlorosis is caused due to the deficiency of

A. Mg

B. Ca

C. B

D. Mn

Answer: A

Watch Video Solution

91. Which element are considered as balancing elements?

A. Ca and K

B. C and H

C. N and S

D. Mg and Fe

Answer: A

Watch Video Solution

92. The group of mineral nutrients known as frame work elements is

A. N, S, P

B. C, H, O

C. Mg, Fe, Zn

D. Zn, Mn, Cu

Answer: B

Watch Video Solution

93. Which element essential for stability of chromosome structure?

A. Zn

B. Ca

C. Mo

D. Fe

Answer: B

Watch Video Solution

94. "Reclamation" and "Little leaf" disease, caused by deficency of

A. Zn and Mo

B. Cu and Zn

C. Cu and B

D. Mn and Cu

Answer: B

Watch Video Solution

95. Which element is required in comparatively least quantity for the growth of plant?

A. Zn

B. N

C. P

D. Ca

Answer: A

Watch Video Solution

96. Which of the following essential element is not properly placed in the given category?

A. Cu

B. Zn

C. Mg

D. Mn

Answer: C

Watch Video Solution

97. Which mineral nutrients are called critical element for crops?

A. N, P, K

B. C, H, O

C. N, S, Mg

D. K, Ca, Fe

Answer: A

Watch Video Solution

98. Which element is required in the meristematic tissues like buds, leaves and root tips?

A. K

B. Ca

C. N

D. S

Answer: B

Watch Video Solution

99. The disease 'little leaf' of fruit trees is caused by the deficiency of

A. Zn-deficiency

B. Cu-deficiency

C. Mo-deficiency

D. Mn-deficiency

Answer: A

Watch Video Solution

100. The major portion of the dry weight of plants comprised of

A. Nitrogen, phosphorus and potassium

B. Calcium, magnesium and sulfur

C. Carbon, nitrogen and hydrogen

D. Carbon, hydrogen, and oxygen

Answer: D

Watch Video Solution

101. Browning of cauliflower takes due to deficiency of which one of the following elements

A. Copper

B. Manganese

C. Zinc

D. Molybdenum

Answer: D

Watch Video Solution

102. Stomata of CAM plants

A. Are always open

B. Open during the day and close at night

C. Open at night and close during the day

D. Never open

Answer: C

Watch Video Solution

103. Stomata of a plant open due to : -

A. Influx of potassium ions

B. Efflux of potassium ions

C. Influx of hydrogen ions

D. Influx of calcium ions

Answer: A

Watch Video Solution

104. Plants deficient of element zinc, show its effect on the biosynthesis of plant growth hormone

A. Auxin

B. Cytokinin

C. Ethylene

D. Abscisic acid

Answer: A

Watch Video Solution

105. Which one of the following nitrogen is not a constituent : -

A. Idioblast

B. Bacteriochlorophyll

C. Invertase

D. Pepsin

Answer: A

Watch Video Solution

106. Gray spots of oat are caused due to deficiency of

A. Cu

B. Zn

C. Mn

D. Fe

Answer: C

Watch Video Solution

107. The most abundant element present in the plant is :-

A. Iron

B. Carbon

C. Nitrogen

D. Manganese

Answer: B

Watch Video Solution

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

A. Chemical stimulation by the prey

B. A passive process requiring no special ability on the part of the plant

C. Specialized muscle - like cells

D. Rapid turgor pressure changes

Answer: D

Watch Video Solution

109. The deficiencies of micronutrients, not only affects growth of plants but also vital functions such as photosynthetic and mitochondrial electron flow. Among the list given below, which group of three elements shall affect most, both photosynthetic and mitochondrial electron transport -

A. Cu, Mn, Fe

B. Co, Ni, Mo

C. Mn, Co, Ca

D. Ca, K, Na

Answer: A

 Watch Video Solution

110. Potometer works on the principle of -

A. Amount of water absorbed equals the amount transpired

B. Osmotic pressure

C. Root pressure

D. Potential difference between the tip of the tube and that of the plant

Answer: A

Watch Video Solution

111. Farmers in a particular region were concerned that pre-mature yellowing of leaves of a pulse crop might caused decrease in the yield. Which treatment could be most be most beneficial to obtain maximum seed yield?

A. Removal of all yellow leaves and spraying the remaining green leaves with 2,4,5-trichlorophenoxy acetic acid

B. Application of iron and magnesium to promote synthesis of chlorophyll

C. Frequent irrigation of the crop

D. Treatment of plants with cytokinins along with a small dose of nitrogenous fertilizer

Answer: B

Watch Video Solution

112. Sulphur is an important nutrient for optimum growth and and productivity in

A. Fiber crops

B. Oil seed crops

C. Pulse crops

D. Cereals

Answer: B

Watch Video Solution

113. A : Some mineral nutrients are essential.

R : They can be synthesized by the plants.

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

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

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

D. If both Assertion and Reason are false.

Answer: B

Watch Video Solution

114. Assertion: Ca^{++} cannot replace H^{+} adsorbed on clay or humus particles.

Reasoning: The retentive capacity of Ca^{+2} is more than that of H^{+}.

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

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

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

D. If both Assertion and Reason are false.

Answer: B

Watch Video Solution

115. A : Chelating agents used in improving availability of some minerals in soil are actually electron acceptors.

R : They increase solubility of some minerals in acidic soils.

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

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

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

D. If both Assertion and Reason are false.

Answer: B

Watch Video Solution

116. A : N, P, K are called critical elements.

R : They become deficient easily in soil due to leaching and higher requirement.

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

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

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

D. If both Assertion and Reason are false.

Answer: D

Watch Video Solution

Archives

1. A plant requires magnesium for :

A. Cell wall development

B. Holding cells together

C. Protein synthesis

D. Chlorophyll synthesis

Answer: D

Watch Video Solution

2. Which of the following is a flowering plant with nodules containing filamentous nitrogen-fixing microorganism

A. Cicer arietinum

B. Casuarina equisetifolia

C. Crotalaria juncaea

D. Cycas revolute

Answer: B

Watch Video Solution

3. About 98 per cent of the mass of everv living organism is composed of just six elements including carbon, hydrogen, nitrogen, oxygen and

A. Calcium and phosphorus

B. Phosphorus and sulfur

C. Sulfur and magnesium

D. Magnesium and sodium

Answer: B

Watch Video Solution

4. Which one of the following elements is not an essential micronutrient for plant growth ?

A. Ca

B. Mn

C. Zn

D. Cu

Answer: A

Watch Video Solution

5. Carbohydrates are commonly found as starch in plant storate organs. Which of the following five properties of starch (A-E) make it useful as a storage material?

A. Easily translocated

B. chemically non-reactive.

C. easily digested by animals

D. osmotically inactive

E. synthesised during photosynthesis

The useful properties are:-

A. (I), (III), and (V)

B. (I) and (V)

C. (II) and (III)

D. (II) and (IV)

Answer: D

Watch Video Solution

6. Nitrogen fixation in root nodules of Alnus is brought about by

A. Frankia

B. Azorhizobium

C. Bradyrhizobium

D. Clostridium

Answer: A

Watch Video Solution

7. Nitrogen fixation in root nodules of Alnus is brought about by

A. Frankia

B. Azorhizobium

C. Bradyrhizobium

D. Clostridium

Answer: A

Watch Video Solution

8. Guard cells help in

A. Fighting against infection

B. Protection against grazing

C. Transpiration

D. Guttation

Answer: C

Watch Video Solution

9. Manganese is required in

A. Chlorophyll synthesis

B. Nucleic acid synthesis

C. Plant cell wall formation

D. Photolysis of water during photosynthesis

Answer: D

Watch Video Solution

10. Which of the following is a symbiotic nitrogen fixer

A. Azolla

B. Glomus

C. Azotobacter

D. Frankia

Answer: D

Watch Video Solution

11. Which one of the following pairs is wrongly matched?

A. Textile-amylase

B. Detergents-lipase

C. Alcohol-nitrogenase

D. Fruit juice-pectinase

Answer: C

Watch Video Solution

Watch Video Solution

12. An element playing important role in nitrogen fixation is

A. Manganese

B. Zinc

C. Molybdenum

D. Copper

Answer: C

Watch Video Solution

13. Which one of the following is not a micronutrient?

A. Zinc

B. Boron

C. Molybdenum

D. Magnesium

Answer: D

Watch Video Solution

14. The chief water conducting elements of xylem in gymnosperms are

A. Transfusion tissue

B. Tracheids

C. Vessels

D. Fibers

Answer: B

Watch Video Solution

15. which one of the following structures between two adjacent cells is an effective transport pathway?

A. Endoplasmic reticulum

B. Plasmalemma

C. Plasmodesmata

D. Plastoquinones

Answer: C

Watch Video Solution

16. One of the free-living, anaerobic nitrogenfixer is

A. Rhizobium

B. Azotobacter

C. Beijerinckia

D. Rhodospirillum

Answer: D

Watch Video Solution

17. The common nitrogen-fixer in paddy fields is

A. Oscillatoria

B. Frankia

C. Rhizobium

D. Azospirillum

Answer: D

Watch Video Solution

18. Nitrifying bacteria

A. reduce nitrates to free nitrogen

B. oxidize ammonia to nitrates

C. convert free nitrogen to nitrogen compounds

D. convert proteins into ammonia

Answer: B

Watch Video Solution

19. Which one of the following elements (miconutrients) in plants is not remobilised ?

A. Sulphur

B. Phosphorus

C. Calcium

D. Potassium

Answer: C

 Watch Video Solution

20. A prokaryotic autotrophic nitrogen fixing sym- biont- is found in

A. Pisum

B. Alnus

C. Cycas

D. Cicer

Answer: C

Watch Video Solution

21. Companion cells are closely associated with

A. Transfusion tissue

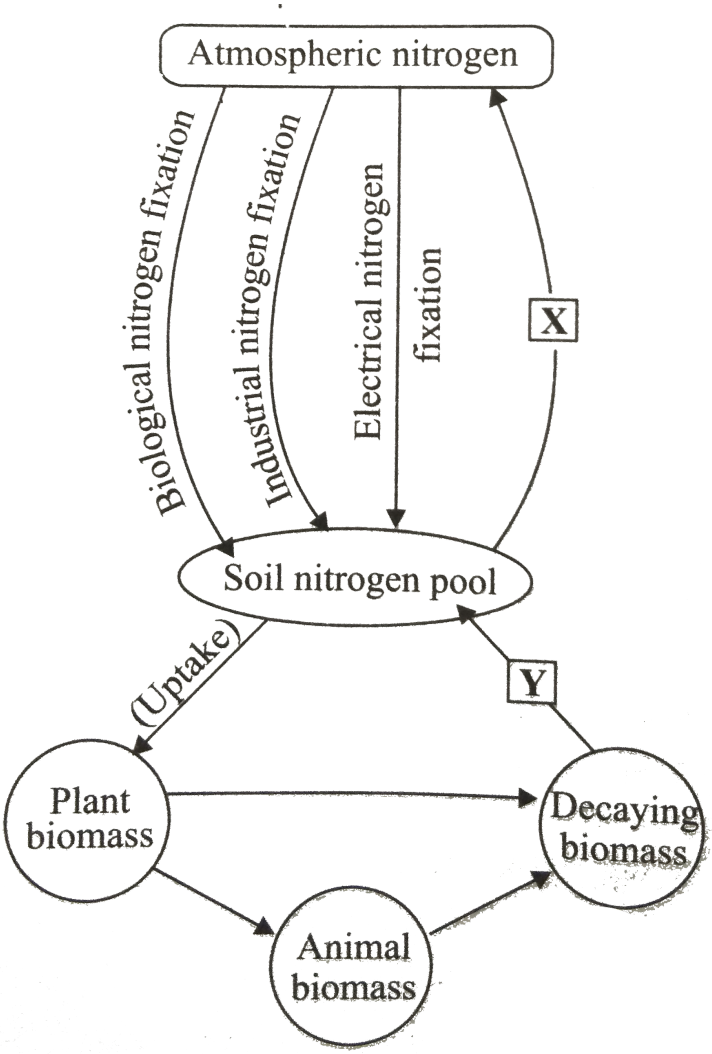
B. Tracheids

C. Sieve elements

D. Companion cells

Answer: C

Watch Video Solution



22.

Identify the labels X and Y in the given outline of N_2 cycle and select the correct option.

A.

(A)	(B)	(C)	(D)
Dentrification	Ammonification	Plants	Animals

B.

(A)	(B)	(C)	(D)
Nitrification	Dentrification	Animals	Plants

C.

(A)	(B)	(C)	(D)
Dentrification	Nitrification	Plants	Animals

D.

(A)	(B)	(C)	(D)
Nitrification	Ammonification	Animals	Plants

Answer: A

Watch Video Solution

23. Leguminous plants are able to fix atmospheric nitrogen through the process of symbiotic nitrogen

fixation. Which one of the following statements is not correct for this process of nitrogen fixation ?

A. Nodules act as sites for nitrogen fixation.

B. The enzyme nitrogenase catalyses the conversion atmospheric $N_2 \rightarrow NH_3$.

C. Nitrogenase is is insensitive to oxygen.

D. Leghemoglobin scavenges oxygen and is pinkish in color.

Answer: C

Watch Video Solution

24. The function of leghaemoglobin in the root nodules of legumes is

A. expression of nif gene

B. Inhibition of nitrogenase activity

C. oxygen removal

D. nodule differentiation

Answer: C

Watch Video Solution

25. A nitrogen fixing microbe associated with the fern Azolla in rice fields is

A. Anabaena

B. Frankia

C. Tolypothrix

D. Spirulina

Answer: A

Watch Video Solution

26. Best defined function of Maganese in green plants is

A. Calvin cycle

B. Nitrogen fixation

C. Water absorption

D. Photolysis of water

Answer: D

Watch Video Solution

27. Which one of the following is correctly matched ?

A. Apoplast-Plasmodesmata

B. Potassium-Readily immobilization

C. Bakane of rice seedlings-F. Skoog

D. Passive transport of nutrients-ATP

Answer: C

Watch Video Solution

Watch Video Solution

28. Which one of the following is wrong statement ?

A. Root nudule forming nitrogen fixers live as aerobesunder free-living conditions.

B. Phosphorus is a constituent of cell membranes, certain nucleic acids, and all proteins.

C. Nitrosomonas and Nitrobacter are chemoautotrophs.

D. Anabaena and Nostoc are capable of fixing nitrogen in free-living state also.

Answer: A

Watch Video Solution

29. For its activity, carboxypeptidase requires

A. Zinc

B. Iron

C. Niacin

D. Copper

Answer: A

Watch Video Solution

30. For its action, nitrogenase requires

A. High input of energy

B. Light

C. Mn^{2+}

D. Super oxygen radicals

Answer: A

Watch Video Solution

31. The first stable product of fixation of atmo- spheric nitrogen in leguminous plants is

A. NO_2^-

B. Ammonia

C. NO_3^-

D. Glutamate

Answer: B

Watch Video Solution

32. Deficiency symptoms of nitrogen and potas- sium are visible first in

A. Senescent leaves

B. Young leaves

C. Roots

D. Buds

Answer: A

Watch Video Solution

33. Which one gives the most valid and recent explanation for stomatal movements?

A. Guard cell photosynthesis

B. Transpiration

C. Potassium influx and efflux

D. Starch hydrolysis

Answer: C

Watch Video Solution

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

A. magnesium, sulphur, iron, zinc

B. phosphorus, potassium, sulphur, calcium

C. calcium, magnesium, manganese, copper

D. potassium, phosphorus, selenium, boron

Answer: B

Watch Video Solution

35. Root pressure develops due to

A. Increase in transpiration

B. Active absorption

C. Low osmotic potential in soil

D. Passive absorption

Answer: B

Watch Video Solution

36. During biological nitrogen fixation, inacti- vation of nitrogenase by oxygen poisoning is prevented by

A. Cytochrome

B. Leghaemoglobin

C. Xanthophyll

D. Carotene

Answer: B

Watch Video Solution

37. Roots play insignificant role in absorption of water in

A. Wheat

B. Sunflower

C. Pistia

D. Pea

Answer: C

Watch Video Solution

38. Which one of the following characteristics is not shared by birds and mammals ?

A. Ossified endoskeleton

B. Breathing using lungs

C. Viviparity

D. Warm blooded nature

Answer: C

Watch Video Solution

39. Which is essential for the growth of root tip?

A. Ca

B. Mn

C. Zn

D. Fe

Answer: C

Watch Video Solution