

1. The second and fourth sub stages of prophase are _____ and _____
2. The process by which chromosomes exchange parts is called _____ and its point of occurrence is called _____.
3. The organelle responsible for movement of chromosomes to the poles is known as _____
4. The two strands of a chromosome are known as _____ and they are held together by _____
5. A cell preparing for meiosis is called _____
6. The division of the Nucleus is known as _____ while that of the cytoplasm is called _____
7. Give two characteristics each of the male and female reproductive cells of cryptogam male _____ and _____ female _____ and _____
8. The huge sporophyte of the giant phaeophyta consist of _____ and _____
9. The alternating stages or generation of the sporophyte and pteridophyte differ in _____ and _____
10. An example of the most complex phaeophyta is _____
11. The bacterial reproduce by _____
12. The three pigment organelles that are made up of plastids are _____ and _____ and _____
13. The endoplasmic reticulum that attached to the ribosome is known as _____
14. The non-protoplasmic components of the cytoplasm include _____ and _____
15. The most common crystals found in plant cells are those of _____
16. Leucoplasts that store large amount of starch are called _____ while those storing fat are called _____
17. The cell of the blue green algae can be classified as _____
18. A cell with DNA not located in an organized nucleus is _____
19. The energy production site of the cell is _____
20. The food eaten and oxygen taken in by man are produced by _____

Bio101

22. _____ produces primitive flowers
List four types of mechanical roots found in plants _____
23. _____
Daucus carota is an example of _____
24. A swollen tuberous root at _____ interval is termed _____
25. The two major function of plant roots include _____ and _____
26. An example of the pteridophyte is _____
27. The root structures of the bryophytes are called _____
28. Karyogamy is _____
29. Carbohydrate food is stored in fungi in form of _____
30. The blue green pigment found in the blue green algae is called _____
31. The algae body is not made of true parenchymatous cells.
True/false
32. The asexual generation in the alternation of generation reproduces by _____
33. The vascular bundles of the dicotyledonous plants are arranged in Rings.
True/false
34. The botanical names of green vegetables and cultivated lettuce are _____ and _____ respectively.
35. The sucking roots of parasites plants and the breathing roots of aquatic plants are known as _____ and _____.
36. The two major general functions of the vegetable parts of plants are _____ and _____.
37. The vegetation of a particular region is referred to as the _____ of the region.
38. Exchange of segments between homologous chromosomes during cell division is known as _____ and the point of Exchange are termed _____
39. The first and last sub stages of Meiotic prophase I is _____ and _____ respectively.
40. Two classes in the division phycophyta are _____ and _____.
41. The science or act of classifying plants into group is known as _____.
42. The two botanical names given to a plant are termed _____ and _____ name.
43. The smallest unit of classification is the _____.

45. The three phases of sexual reproduction in fungi are _____ and _____.
46. The most common crystals found in the plant cells are those of _____.
47. The size of bacteria cells ranges between _____ and _____.
48. Leaf roll of potatoes is caused by _____.
49. Energy conversion and storage of fats within the cells take place in _____ and _____ respectively.
50. The waxy substance present in the cell wall is _____ and _____.
51. The major function of the cell wall is _____ while that of ribosomes is _____.
52. Swollen root that cluster at the base of the stem are called _____ while the slender roots that become suddenly swollen at the tip are _____.
53. The type of supporting roots found in sorghum bicolor is _____ while the type found in adansonia digitata is _____.
54. The root of plant develops from _____ while the stem develops from the _____.
55. An example of a tendril climber is _____.
56. The plant root is protected by the _____.
57. With respect of response to stimuli, plant shoot is _____ while plant root is _____.
58. Examples of naked seed plants are _____.
59. Plants that produce naked seed are _____.
60. The asexual spores used by some fungi include _____, _____, _____, _____, and _____.
61. The classes of algae include the following _____, _____, _____, _____, and _____.
62. The motile spores are called _____.
63. Method of sexual reproduction in lower plants includes _____, _____ and _____.
64. In alternation of generation the two stages are _____ and _____.
65. Asexual spores in cryptogams are _____ and _____.
66. The main body of the Thallophyte is called _____.
67. The viral particle in a living cell is _____.
68. The bacteria virus is called _____.
69. Climbing plants without special climbing devices are _____ while those that cover up their support without attaching to the support are _____.
70. Slender tap roots that become suddenly swollen at the tip are _____.

71. Roots used as sucking organ are called _____ while
72. Leafy outgrowth developed at the base of a leaf is _____ the one at the base of a leaflet is _____.
73. Foliar buds produced at the space between the leaf and stem is known as _____.
74. The two classes of plant under angiosperm are _____ and _____.
75. Where are plastids found in plants _____.
76. Where is DNA found in plants _____.
77. Cell size before division varies from family to family.
(true/false)
78. Growth occurs in multicellular plants by elongation before division. (true/false)
79. One difference between prokaryotic and eukaryotic cells is _____.
80. One difference between nuclear membrane and cell membrane is _____.
81. Cells can be studied by means of _____.
82. Cells sizes vary between _____ and _____.
83. Different types of cells always perform the same function in plants.
(true/false)
84. Cells in growth regions are called _____ and their chromosome components (ploidy) is _____ while those in reproductive organ are called _____ and their chromosome components is _____.
85. TMV and CMV are good example of _____.
85. The active virus in a living host is called a _____.
87. The capsid is found in _____, while the bacteriophages are _____ infecting bacteria.
88. From the below magnifera is _____ while indica is the _____ name.
89. The name magnifera indica shows a good example of _____.
90. Bacterial cells are a good example of _____.
91. Nuclear membrane is present in _____ cell but absent in _____ cell.
92. Membranous organelles is lacking in _____ cell, while an internal division of labour is seen in _____.

- _____ is associated with transportation of materials.
94. _____ and _____ are cellular structures for motility.
95. _____ is the cellular energy produced in the _____ which is referred to as the _____ of the cell.
96. _____ is plants without vascular tissues.
97. Lichens are among the _____ while the Gymnosperms are _____ with _____ ovule.
98. Non-flowering plants are called _____ while the flowering plants are _____.
99. The food we eat and the oxygen we breathe are produced by _____ organelle.
100. Stages of sexual reproduction in some flowerless plants include _____, _____, _____, and _____.
101. _____ is a fusion of the protoplast of only two gamete cells.
102. Akinetes are found in _____.
103. _____ is green thallophytes with or without other pigments.
104. Nitrogen fixation and fertilizers are beneficial effects of _____.
105. Capsid and DNA can be found in _____.
106. CASSAVA MOSAIC disease and TOBACCO MOSAIC disease are caused by _____.
107. A viral particle affecting a host is _____.
108. _____ viruses attack other bacteria.
109. Six classes of algae include _____, _____, _____, _____, _____ and _____.
110. Bryophyta includes _____ and _____.
111. Thallopyta includes _____ and _____.
112. Flowers part in angiosperm are called _____.
113. Plants with naked ovule is _____.
114. The main factor used in classifying plant kingdom into two is _____.
115. The plant kingdom is majorly grouped into _____ and _____.
116. _____ is cells without organized nucleus.
117. _____ and _____ are the cells responsible for components genetic information in plants.
118. _____ play important role in cell division.
119. Cellular movement involves two kinds of rod movement _____ and _____.

120. Cells are separate from their external environment by.
[a] Plasma membrane [b] Organelles [c] Protoplasm
[d] Cytoplasm
121. The cell inclusions embedded within the cytoplasm are called
[a] Cytoplasm [b] Protoplasm
[c] Organelles [d] Tissues
122. The extensive network of membrane enclosed space present in the endoplasmic reticulum is
[a] Ribosome [b] Cisternea
[c] Ribonucleic acid [d] Vesicles
123. Body capable of causing disintegration in the Golgi complex are called
(a) Enzymes (b) Lysosomes
(c) Glandular (d) Mysosomes.
124. The chloroplast that gives colour to flowers and leaves are called
[a] Leucoplast [b] Plastids \rightarrow Chromoplast & Chloroplasts
[c] Chromoplast [d] Granoplast.
125. All the characteristics are true of gymnosperms except.
[a] They all possess naked ovule
[b] They possess flower without whorls
[c] They are flower with whorls [d] They are flowering plants.
126. The cyanophyta are the
[a] Green algae [b] Red algae
[c] Blue green algae [d] Brown algae
127. The characteristics of fungi include the following except
[a] They are achlorophyllous
[b] Carbohydrate food stores in form of starch
[c] Wall of hyphae made up of chitin [d] they are autotrophic
128. In which group of angiosperm are the vascular bundles arranged in rings?
[a] Monocotyledons [b] Bryophyte
[c] Dicotyledons [d] A and B
129. Plants without vascular tissues includes
[a] Pterodophytes [b] Gymnosperm

130. The collection of species, which bear close resemblance to one another as far as the morphological characteristics of the flora in reproductive plants are considered, is referred to as
- [a] Species [b] Taxonomy
[c] Genus [d] Family
131. Oogamy is
- [a] The function of differentiated male and female gametes
[b] The fusion of gametes similar in shape, size and behaviour
[c] The fusion of gamete slightly different in size and behaviour
[d] None of the above
132. The life cycle of many flowerless plants is completed in two alternating generation, which differs in:
- [a] Mode of respiration and colour
[b] Morphology and mode of reproduction
[c] Morphology and size
[d] Weight and reproduction
133. The female gametes in alternation of generation is the
- (a) Sporophyte (b) Chromosome
(c) Egg cell (d) Oogamy
134. The male gametes in alternation generation is the
- (a) Antherozoid (b) Haploid
(c) Isogamy (d) Gametes
135. The sporophyte give rise to the
- (a) Chromosome (b) Sporophyte
(c) Meiosis (d) Spore young cells
136. The following is true of the algae except
- (a) They are autotrophic
(b) Cell wall is not made of true cellulose
(c) Green thallophytes with chlorophyll
(d) B & C
137. Heterocyst present in the nostoc is likely for
- (a) Food storage (b) Absorption of water (c) Vegetable propagation and food storage (d) Absorption of water and food storage

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138. The following statements are true except
 [a] Chlamydospores are resting spores from vegetative hyphae
 [b] Conidia are formed singly or in chains conidiophore
 [c] Zoospores are non-motile spores
 [d] Ascospores are borne in sacs

The fusion protoplasm is referred to as
 (a) Karyogamy (b) Plasmogamy
 (c) Gametangia (d) Isogamy

The following are examples of pteridophytes except
 (a) Lycopodium (b) Sellaginella
 (c) Ferns

Plants root are modified to perform some functions except

(a) Storage (b) Physiological
 (c) Chemical (d) Mechanized

142. When tuberous root appear in a cluster at the base of stem it is called

(a) Modulose (b) Fasciculated
 (c) Nodulose (d) Annulated

143. Daucus currota is an example of _____ root.

(a) Moniliform (b) Fusiform
 (c) Coniform (d) Napiform

144. One of the major function of contractile roots in purely.

(a) Mechanized (b) Physiological
 (c) Physical (d) Chemical

145. Stem that can carry the weight of its fruit leaves and flower are known as _____.

(a) Solid stem (b) Bole stem
 (c) Erect stem (d) Culm stem

146. The following are examples of bole stem except _____

(a) Catapa (b) Milicia excels
 (c) Ficus sun (d) Musasapientum

147. Which of the following is not an erect stem?

(a) Culm (b) Corm

148. Weak stemmed plants includes the following plants except
 (a) Runner (b) Rhizome
 (c) Stolom (d) Trailer
149. The bud found at apex of underground stem is called ____
 [a] Auxiliary bud [b] Terminal bud
 [c] Underground bud [d] Aerial bud
150. Sub-aerial stem is found in
 [a] Allium cepa [b] Dancus carrota
 [c] Manihot esculentum [d] Tridax procumbers
151. A plant which grows on another plant without harm to the host plant is called ____
 [a] A parasite [b] A epiphyte
 [c] A saprophyte [d] A predator [e] A hermaphrodite
152. The function of lenticels is
 [a] To remove excess water in the plant
 [b] To absorb water from the atmosphere
 [c] For gaseous exchange
 [d] To absorb light [e] To store food
153. An organism which lives on the remains of a dead plant is
 [a] An Endoparasite [b] A saprophyte
 [c] A commensal [d] A symbiont [e] An ectoparasite
154. The carrier of hereditary characters in plants and animals is the
 [a] Cell [b] Nucleus
 [c] Chromosome [d] Chloroplast [e] Gene
155. Which one of the following options is not true for mucor or rhizopus? It
 [a] Grows on moist dead organic matter
 [b] Is a plant [c] has cellulose cell wall
 [d] Reproduces asexually by producing spores
 [e] Haas no chlorophyll
156. The region of cell division in a root is
 [a] Root cap [b] Endodermis
 [c] Xylem [d] piliferous layer [e] Meristem

flowers?

- [a] Stigma are usually large and feathery
- [b] Nectary is usually absent
- [c] The pollen grains have rough spiny surfaces
- [d] The flowers are not scented
- [e] The pollen is light and smooth

158. If the bark and phloem tissues of a woody shoot are peeled off by ringing, the whole plant will eventually die because

- [a] Water does not reach the leaves
- [b] Water and salts remain below the ringed portion
- [c] There is a withdrawal of water from the roots by soil
- [d] Manufactured food does not reach the root
- [e] The roots store too much water.

159. One common feature of the fungi, algae, mosses and ferns is that they

- [a] Are photosynthetic
- [b] Show alternation of generation
- [c] Reproduce by means of conjugation
- [d] Can survive dry conditions
- [e] Have no seeds

160. Roots of plant are normally

- [a] Positively phototropic
- [b] Negatively geotropic
- [c] Negatively hydrotropic
- [d] Positively hydrotropic
- [e] Negatively chemotropic

161. Root hairs are developed from the

- [a] Root apex of roots [b] Epidermis of roots
- [c] Vascular bundles [d] Endodermis [e] Pericycle

162. In a dicot leaf, guard cells differ from other epidermal cells because they

- [a] Have no definite shape [b] Lack nuclei
- [c] Are smaller [d] Contain chloroplasts
- [e] Lack vacuole

163. In woody plants, gases and water vapour are transported across the stems by the

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- Plants, which can survive in places where the water supply is limited, are
65. Mosses, liverworts and ferns can be grouped together because they
66. Which of the following INCORRECT? The prothallus of a fern
67. Which of the following cell constituents is not common in both plants and animals?
68. Flowering plant is monoecious if
69. Which of the following is not a waste product of plants?
170. Bryophytes are different from flowering plants because they
- [d] Phloem fibres [b] Medullary rays [c] Sieve tubes
[e] Phloem parenchyma
- [a] Bryophytes [b] Mesophytes
[c] Xerophytes [d] Hydrophytes [e] Pteridophytes
- [a] Are all aquatic plants [b] All grow in deserts
[c] Are seedless plants [d] Have undifferentiated plant
[e] All produce colourless flowers
- [a] Is a flattened heart shaped structure
[b] Is green because its call contain chloroplasts
[c] Is the dominant plant [d] Bears the sexually organs
[e] Is attached to the ground by numerous rhizoids
- [a] Mitochondria [b] Ribosomes
[c] Chloroplast [d] Golgi apparatus [e] Vacuoles
- [a] The androecium is formed on one plant
[b] The gynoecium is monocarpous
[c] It produces essential organs
[d] The gynoecium and androecium are on the same plant
[e] The flowers are unisexual
- [a] Tannins [b] Oxygen
[c] Carbon dioxide [d] Sap [e] Alkaloids
- [a] Live in moist habitats
[b] Are small plants
[c] Reproduce sexually and asexually
[d] Have small leaves
[e] Have no vascular tissues

ANSWERS TO BIO 101

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1. Eygonema, Diplonema
2. Crossing over, Chiasmata
3. Spindle fibre
It is chiefly involved in moving and segregating the chromosomes during nuclear division, collective form is referred to as mitotic spindle in mitosis and meiotic spindle in meiosis
4. Chromatids, Centromeres
5. Metocyte
6. Karyokinesis and cytokinesis
Note that the fusion of nuclei is karyogamy while the division is karyokinesis
7. Male-motile, active and small female-non-motile, passive and large
8. Blade and [sporophylls]
9. Mode of reproduction and morphology
10. Kelps [large sea weed]
Phaeophytes are also known as brown algae and are commonly adapted to marine environment they are the largest protist
11. Binary fission
12. Chloroplast, chromoplast and leucoplast Chloroplast [green], chromoplast [colourful] and leucoplast [white] and are responsible for pigment synthesis and storage
13. Rough endoplasmic reticulum also referred to as [RER]
14. Crystals and vacuoles
15. Calcium oxalate
16. Amyloplast, Elainoplast
17. Prokaryotic cell
18. Prokaryotic cell
19. Mitochondria
It is the "power house of the cell" ATP [Adenosine Triphosphate] is the energy food [The most important cellular energy]
20. Chloroplast
21. Gymnosperms
22. Prop Root, silt roots, climbing roots, buttress roots
There are only five types of roots classified for mechanical or additional support and they include the four above and epiphytic roots.
23. Conical roots
Damcus carrot is specie of carrot and posses the type of root that swollen at the upper part and gradually tapers towards the base to give a cone shape and that type of root is called "CONICAL ROOT"
24. Moliniform root

25. Absorption of nutrient
Anchorage for the plant it gives it support
26. Fern
Example of pteridophytes include fern, horse tail or equiseum
27. Rhizoids
Rhizoid help in storage and absorption of water and nutrients in the soil
28. Fusion of nuclei
Part of the stages of the sexual reproduction in fungi
29. Glycogen
30. Phycocyanin
31. False
The algae body is made of parenchymatous cells
32. Spores
Alternation of generation asexually by majority reproductive by the use of spore in the gametophyte and saprophyte
33. True
34. Green Vegetable
Cultivated lettuce, lactuca sativa
35. Haustoria, pneumatopore
36. Nutrition and Growth of a plant
37. Flora
38. Crossing over, chiasmata
39. Leptonema and diakinesis
The five sub-stages involved in meiotic prophase are leptonema, Zygonema[Zygonema]-pachynema-diplonema-diakinesis
40. Cyanophyta and Euglenophyta
41. Taxonomy
42. Generic name and Specific name.
43. Species
44. Lichen
45. Plasmogamy, karyogamy and Gametes with gametangia
46. Calcium oxalate
47. 0.1NM to 0.25NM
48. Virus
49. Mitochondria, Elaioplast storage of fats and oil is called Elaioplast [leucoplasts], storage of starch is called amyloplast [leucoplasts] they are both examples of leucoplasts.
50. Suberin and cutin
The waxy substances make it a flower flexible
51. Protection, synthesis of protein

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52. Fasciculated root: fascicle at the base of the stem
53. Pro roots, buttress root
 Pro root: is modified for additional support and develops from the lower node of the stem of erect monocotyledonous plant.
 Buttress root: are huge outward extensions of the base of tall forest tree that provide additional support to huge trunks against wind currents.
54. Radicule plumule
 The radicle then forms the roots that possess the root hair, the plumule forms the stem that carries the flower, leaf etc.
55. Gloriosa superba
 Tendril climbers attach themselves to other plants or objects using their tendrils and are majority classified as scandent plants.
56. Root cap
57. Positively phototropic and positively geotropic and Hydrographic due to the photosynthesis characteristic of green plant, their shoot that contains the chlorophyll [Chloroplast] is positively phototropic and move against gravity [negatively geotropic]. The plant root that grows downward to tap nutrients and water is therefore negatively phototropic and positively phototropic and hydrotropic
58. Conifers, cycads
 Conifers and cycads belong to the division pinophyta [Coniferophyta] and cycadophyta respectively both belonging to gymnosperm.
59. Gymnosperm
60. Asexual spores, oidia, basidiospores, chlamydospores, zoospores and gonidia.
61. Phaeophyta [Brown algae]
 Cyanophyta [Blue-green algae]
 Euglenophyta [Euglenoids]
 Bacillariophyta [Diatoms]
 Chlorophyta [Green algae]
 Rhodophyta [Red algae]
62. Zoospores
 The motile spores are generally called zoospores while the stationary spores are called Gonidia
63. Anisogamy, Oogamy and Isogamy
 This is quite different from sexual reproduction of fungi that take place in three phases; the stages above are for lower plants belonging to phase gametangia
64. Gametophyte and sporophyte
65. Gonidia and zoospores
66. Thallus
67. Virion
68. Bacteriophage

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scramblers lianes are very thick and woody perennial climbers usually found in the forest e.g. Alafia Barteri
Scramblers do not attach to their support but simply i.e. an against nearly plants e.g. combretum Sp

70. Nodulose, annulated root example of nodulose include maranta while an example of annulated root is psychotria

71. Haustoria
Roots modified for parasitism, suckling roots can also be called "Haustoria"

72. Stipules, stipules
Stipules are difference stipes which are also leaf life out growths but are developed at the bases of the leaflets of compound leaves

73. Auxiliary buds
Auxiliary buds are buds occurring in the axil of leaves

74. Monocot and dicot. Monocot one [cotyledon embryo] with paralleled venation and dicot [Two cotyledon embryo] with reticulate venation are the two classes of plants under angiosperm

75. Cytoplasm plastid is sub-cellular, self-replicating major organelle found in the cytoplasm of plants and algae

76. Nucleus

77. False

78. False
Cellular growth is the same in all families in multicellular plant

The phase of growth includes cell division, cell elongation and cell differentiation. One occurs before the other occurs so cell division occurs before cell elongation

79. There are a lot of differences between prokaryotic and Eukaryotic cells and they are Prokaryotic cells

1. Nuclear membrane is absent
2. DNA with some non-histone
3. Absence of intracellular movement

Eukaryotic cell

1. Nuclear membrane present
2. DNA complexed with histone and non-histone, cytoplasmic
3. Cytoplasmic: presence of intercellular movement cytoplasmic streaming, phagocytosis, pinocytosis

80. Nuclear membrane encloses the nucleus while cell membrane encloses the whole cell organelles and is quite bigger than nucleus membrane

81. Microscope

Cells are microscopy therefore needs microscope for proper viewing.

82. $0.1\mu\text{m} - 0.25\mu\text{m}$ & $10\mu\text{m} - 100\mu\text{m}$

83. False

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Different types of cell would also carry out different function in plants

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84. Question not clear

85. Virus

86. Viron

They are viral particle that affect specific host.

87. Head of the virus, virus affecting bacteria [Bacteriophages]

88. Genus, specie

The last two nomenclature binomial systems of classification are called genus and specie which then combination is known as "Botanical Name".

89. Mango tree

The botanized name for mango is *Mangifera Indica*.

90. Prokaryote

Prokaryote consists of bacterial and blue-green algae.

91. Prokaryote cell, Eukaryotic cell

92. Prokaryote cell, Eukaryotic cell

The prokaryotes are the smallest cells known that lack membranous Organelle that undergo division of labour.

93. Endoplasmic recticulum [ER] Endoplasmic Reticulum helps in transport, storage and synthesis of materials in the cell.

94. Microtubules and microfilaments. The microtubules are structure framework of cilia and flagella and the micro filaments do not contain tubulin.

95. ATP [AdenoSine Triphosphate], Mitochondrion, power of the cell, mitochondrion is mostly referred to as the power house of the cell because enzymes located on the cristse carry pot the energy yielding steps of Aerobic metabolism, ATP the most important cellular energy is produced

96. Bryophytes

Bryophytes are the only plants that lack vascular tissues.

97. Thallophyte borne with naked Ovule. Thallophytes include fungi, Algae and lichen.

Gymnosperms are flowers without which and are borne with naked ovule.

98. Cryptogams and phanerogams

99. Chloroplast found in the green plants.

100. Plasmogamy, karygamy and gametangia.

101. Plasmogamy

Plasmogamy is the one of the sexual reproduction of fungi, the cytoplasm of two parent mycelia use together without fusion of nuclei [Kayogamy].

102. Filamentous form of anaebena

103. Blue green algae

Blue green algae are the green thallophytes that can undergo photosynthesis because of their green pigment e.g. Noston and anaebena.

104. Bacteria

Beneficial effects of bacterial include nitrogen fixation, fertilizers, and nitrification.

Head of virus

Head of virus contain only two structures the DNA which is inside the capsid [Protein coat].

Virus

Viron

Bacteriophage

Rhodophyta [Red Algae], phaeophyta [Brown Algae], Cyanophyta [Blue Green], Anglenophyta [Englenoid], Baccillaophyta [Diatoms] and Chlorophyta [Green Algae]

Liverwort mad mosses

Algae, fungi, lichen

The flowering parts are the main reproductive organ of the flowering plant.

Gymnosperm

Their flowering ability [ability to produce flower]

Cryptogams know as non-flowering plant, phanerogan known as flowering plants.

Prokaryotic cell literally means "before the nucleus" they do not have organized nucleus.

Chromatin and nucleolus

Nucleus [Nucleoli]

Microfilament and microtubules

Microtubules are capable of rapid assembly, disassembly and primary composed of protein tubulous they are structure framework of Celia and flagella.

Microfilament are thread like and are cannular in diameter than microtubules, they do not contain tubulers.

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120. A

121. B

122. B

123. C

Leucoplast is white in colour white granoplast is not a pigment.

Plastid is the combination of the three pigments in plant which are chloroplast, chromoplast and leucoplast.

124. B

125. C

126. C

127. D

128. C

Bryophyte is not an example of angiosperm and they do not belong to the same class.

Bryophyta is a non-flowering plant [Cryptogams] white angiosperm is a flower plant [Pharogram].

129. D

130. C

132. B
133. C
134. A
135. D
136. B
Algae are cell wall it's not made up of true cellulose.
137. C
The main function of heterocyst is for vegetative propagation and food storage.
138. D
Zoospores are motile spores while gonidia are non-motile spores.
139. B
Karyogamy is the fusion of nuclei, Gametangia consists of either isogamy, anisogamy or oogamy.
140. D
141. C
142. B
143. C
144. C
145. C
Culm stem and bole stem are types of erect stem. Solid stem doesn't exist as a type of stem it is either erect [strong] or weak type of stem.
146. D
Musa sp possess pseudostem and it is formed by joining together the leaf base of several leaves of the plant.
147. B
Examples of erect stem include bole stem, caudex stem, culms stem, scape stem and pseudostem.
148. B
Example of weak stemmed plant include trailers, creepers, climbers, runners, lianes/lianes, scramblers and stranglers
149. B
Terminal bud gives rise to the aerial shoot.
150. A
151. B
An epiphyte is a plant growing on another plant mainly for support without harming the host. A parasite is an organism which lives in endoparasite or on ectoparasite, the parasite benefits but the host suffers.
152. C
Lenticels are small air pores which are usually elliptical in shape.

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153. B
A saprophyte is an organism that lives on dead and decaying organic matters e.g. bacteria and fungi.
154. E
Genes are unit hereditary material located on chromosome present in the nucleus, the nucleus controls the activity of the cell in which it is found, Chloroplast is a cytoplasmic organelle present only in plant cells.
155. C
Mucor or rhizopus belongs to the kingdom fungi, it lacks chloroplast, it grows saprophytically on moist dead organic matter; it has many nuclei; it reproduces asexually by spore formation and it is covered by wall made up of chitin and cellulose.
156. E
The root and stem apex of plant can be divided into region of cell division, followed by the region of cell elongation and the region of cell maturity.
The region of cell division is also known as the apical meristematic cells.
157. C
158. D
The phloem tissue is responsible for the translocation of manufactured food from the leaves to the root when the bark and phloem tissue is removed by ringing; manufactured food from the leaves is disallowed from reaching the roots so the plant dies.
159. E
Fungi lacks chlorophyll hence they cannot photosynthesize. Conjugation occurs in fungi and algae only while mosses, ferns and some algae shows alternation of generation, all of them reproduce by forming spores and not seeds.
160. D
Hydrotropism is the directional response of a plant part in response to water, it is positive when the movement is towards water and negative when it is away from it, Roots of plant bend towards moisture [Positive hydrotropic] while stems and leaves show no response.
161. E
The piliferous layer forms the outer layer in the transverse section of a root; the root hairs arise from the outermost layers of cells of the piliferous layer; the cells are thin-walled and lack cuticle; this facilitates the absorption of water and mineral salts from the soil.
162. D
163. B
164. C
165. C
166. C
167. B
168. D
169. D
170. E

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