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BIOLOGY

BOOKS - VGS PUBLICATION-BRILLIANT

CELL-STRUCTURE AND FUNCTIONS

Exercise

1. Differentiate between Plant cell and animal cell

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2. Differentiate between Prokaryotic and eukaryotic cells.

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3. What would happen to the cell if nucleus is removed? Give two reasons to support your answer.

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4. Lysosomes are known as suicidal bags of the cells. Why?

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5. Why does plant cell posses large sized vacuole?

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6. What would happen to the life of cell if there was no golgi complex?

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7. When you are observing the nucleus of cheek cell in laboratory, what precautions do you take?

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8. Prepare a model of plant cell or animal cell with locally available materials.

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9. Prepare a temporary mount of any leaf peel, observe the stomata and draw their picture. Write a short note on the same.

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10. Draw the Typical Animal Cell and label its parts.

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11. How do you appreciate about the organization of cell in the living body.

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12. If the organization of cell is destroyed due to physical and chemical influence, what will happen?

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13. How could you appreciate the function of tiny cell in a large body of an organism?

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14. Write the main function of Smooth Endoplasmic Reticulum.

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15. Which cell organelles are found exclusively in plant cell?

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16. What are the functions of the cell wall in plant cells?

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17. Write one precaution while observing nucleus in cheek cells

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18. Name the colourless plastids in plants.

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19. Write the name of the plastids that are responsible for different colours in flowers and fruits.

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20. Mention the cell organelle that is called “Protein factories”.

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21. Lysosomes are known as suicidal bags of the cells. Why?

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22. Write the main function of Smooth Endoplasmic Reticulum.

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23. What happens if Endoplasmic reticulum is destroyed in the cell?

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24. Site of protein synthesis in a prokaryotic cell is

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25. Write some examples for prokaryotic cells.

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26. Name the selectively permeable membrane that covers the cell.

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27. What is an enzyme?

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28. Who coined the term ‘Cytoblast’ and why?

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29. What are the sites of cellular respiration ?

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30. What are vacuoles? Write their function?

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31. Which plays a crucial role in maintaining balance of various substances in the cell?

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32. What is the uniqueness of plasma membrane?

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33. Which model explains selective permeability of plasma membrane?

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34. What is the unique feature seen in plant cells?

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35. What are the functions of the cell wall in plant cells?

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36. Who discovered nucleus and when?

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37. On the basis of the presence or absence of organized nucleus cells are categorized into

how many types? What are they?

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38. What are the characteristics of prokaryotic cells?

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39. What are Eukaryotic cells?

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40. What are the important cell organelles?

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41. What is the importance of endoplasmic reticulum?

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42. What is rough endoplasmic reticulum?

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43. What is smooth endoplasmic reticulum?

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44. Who had observed Golgi apparatus in the year 1898?

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45. What is the function of Golgi apparatus?

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46. Lysosomes are known as suicidal bags of the cells. Why?

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47. What are cristae in mitochondria ?

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48. Mitochondria are also called as

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49. Why are chloroplasts green in colour ?

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50. How many types of plastids are present in plants?

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51. What is the primary function of chloroplast?

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52. Who proposed the cell theory?

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53. Who explained that the new cells could be formed only by the division of the pre-existing cells?

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54. What are the two cardinal principles in the modern cell theory?

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55. How do you appreciate about the organization of cell in the living body.

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56. If the organization of cell is destroyed due to physical and chemical influence, what will happen?

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57. How could you appreciate the function of tiny cell in a large body of an organism?

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58. How would you appreciate the role of chloroplasts in plants?

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59. “New cells, could be formed only by the division of pre- existing cell.?” How do you justify this statement?

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60. What are the reasons for different types of flowers and fruits in plants?

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61. What happens if lysosomes are absent in the cells?

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62. What is the reason for colour change in tomatoes? (green-white-yellow- red)

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63. What happens if stomata are closed with paraffin wax?

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64. What questions do you pose to know more details about plasma membrane?

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65. What are the functions of the cell wall in plant cells?

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66. Venu is asking his teacher about different functions of cell organelles of Eukaryotic cell. What questions would he ask his teacher?

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67. Write difference between plasma membrane and cell wall.

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68. What is the reason for colour change in tomatoes? (green-white-yellow- red)

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69. What is the function of a nucleus in a cell?

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70. "Cell is the structural and functional unit of life" – How?

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71. What is Protoplasm? Who coined this term and when?

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72. Name the smallest and largest known cells in this world.

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73. What will happen to the size of the cell if it is placed in such solutions which vary in their concentrations When placed in Hypotonic solution?

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74. What will happen to the size of the cell if it is placed in such solutions which vary in their concentrations. When placed in Isotonic solution?

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75. "A cell is a building unit of an organism." Do you agree with this statement? If yes, explain why?

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76. What is Osmosis ? Define Osmotic Pressure ? Describe Berkily- Hartley method of determining osmotic pressure.

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77. What are genes? What is their function?

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78. Draw a neat and labeled diagram, showing L.S of mitochondria.

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79. Draw a neat and labeled diagram of Endoplasmic Reticulum found in electron microscope.

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80. Write about plastids.

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81. Give a brief account of endoplasmic reticulum.

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82. Primary cells are studied under

A. Optical microscope

B. Compound microscope

C. Electron microscope

D. None

Answer:

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83. The outermost covering of animal cell is

A. Cell wall

B. Plasma membrane

C. Nuclear membrane

D. Nucleolar envelop

Answer:

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84. Cell membrane or plasma membrane is made up of

A. Lipids

B. Proteins

C. Both lipids and proteins

D. Cellulose

Answer:

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85. Identify the selectively permeable membrane.

A. Cell wall

B. Tonoplast

C. plasma membrane

D. Nuclear membrane

Answer:

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86. Cell wall is present in

A. Animals

B. Humans

C. Plants

D. Zooplanktons

Answer:

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87. Nucleus was discovered by

A. Robert Hooke

B. Robert Brown

C. Rudolf Virchow

D. Schwann

Answer:

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88. It acts as cells control room

A. Cell membrane

B. Nucleus

C. Mitochondria

D. Nucleolus

Answer:

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89. This part of the cell bears genetic information.

A. Nucleus

B. Nucleolus

C. Ribosomes

D. Golgi complex

Answer:

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90. Identify the prokaryotic cell.

A. Bacterium

B. Cyanobacteria

C. Paramoecium

D. Both Bacterium and Cyanobacteria

Answer:

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91. This participates in intracellular transport.

A. Endoplasmic reticulum

B. Lysosomes

C. Golgi complex

D. Ribosomes

Answer:

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92. Smooth endoplasmic reticulum helps in the manufacture of

A. Proteins

B. Lipids

C. Carbohydrates

D. Vitamins

Answer:

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93. Rough endoplasmic reticulum helps in the manufacture of

A. Lipids

B. Carbohydrates

C. Proteins

D. Vitamins

Answer:

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94. In vertebrate liver cells it plays a crucial role in detoxifying many poisons and drugs

A. Smooth endoplasmic reticulum

B. Rough endoplasmic reticulum

C. Lysosomes

D. Vacuoles

Answer:

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95. Suicidal bags of the cell is

A. Lysosome

B. Ribosome

C. Nucleosome

D. Golgi complex

Answer:

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96. The number of mitochondria present in each cell are about

A. 1000-2000

B. 150-300

C. 100-150

D. 100-300

Answer:

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97. The power house of the cell is

A. Lysosomes

B. Mitochondria

C. Ribosomes

D. Vacuole

Answer:

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98. The primary function of chloroplasts is to carry out

A. Respiration

B. Photosynthesis

C. Nutrition

D. Transport

Answer:

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99. Who observed cell division for the first time ?

A. Rudolrf Virchow

B. Robert Hooke

C. Hugodevris

D. Robert Brown

Answer:

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100. The fluid inside the nucleus is known as

A. Nucleoplasm

B. Cytoplasm

C. Protoplasm

D. Germplasm

Answer:

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101. Chloroplasts are present in

A. Roots

B. Green leaves

C. Dried leaves

D. Flowers & fruits

Answer:

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102. Leucoplasts are

A. Green

B. Red

C. White

D. Blue

Answer:

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103. Nucleus was invented by

A. Camillo Golgi

B. Schleiden

C. Robert Brown

D. Virchow

Answer:

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104. Characteristics of the organism determined by

A. Lysosomes

B. Nucleus

C. Mitochondria

D. Plastids

Answer:

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105. Which of the following organelles involved in secretion ?

A. Nucleus

B. mitochondria

C. Golgi complex

D. Plastid

Answer:

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106. Cell membrane is made up of mainly

A. Lipids and fats

B. Lipids and proteins

C. Proteins and fats

D. Lipids, fats and proteins

Answer:

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107. The colourless plastids are

A. Chloroplasts

B. Chromoplasts

C. Leucoplasts

D. None

Answer:

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108. Cell wall is made up mainly of

A. Glucose

B. Fructose

C. Maltose

D. Cellulose

Answer:

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109. Name the cell organelle that regulates and controls all the functions of a cell.

A. Ribosomes

B. Lysosomes

C. ER

D. Nucleus

Answer:

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110. Cytoblast refers to

A. ER

B. Golgi complex

C. Ribosomes

D. Nucleus

Answer:

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111. The proteins produced in the ribosomes are altered slightly in

A. ER

B. Golgi complex

C. Mitochondria

D. Lysosomes

Answer:

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112. This cell organell contains destructive enzymes.

A. Chloroplast

B. Nucleolus

C. Nucleus

D. Lysosomes

Answer:

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113. These are “the traps of solar energy”.

A. Lysosomes

B. Ribosomes

C. Chloroplasts

D. Nucleus

Answer:

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114. The basic unit of life is

A. Body

B. Cell

C. Blood

D. Tissue

Answer:

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115. “Storage sacs” of the cell

A. Lysosomes

B. Ribosomes

C. Vacuole

D. Nucleolus

Answer:

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116. This converts the light energy into chemical energy.

A. Lysosomes

B. Mitochondria

C. Chloroplasts

D. Nucleus

Answer:

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117. Leucoplasts store

A. Starch

B. Oil

C. Proteins

D. All

Answer:

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118. Read the following statements. A.) Plastids are present only in plants. B.) Lysosomes contain non-destructive enzymes.

A. Both a, b are correct

B. a correct, b incorrect

C. b correct, a incorrect

D. Both a,b are incorrect

Answer:

119. Read the following statements. A.) Rough ER is the site of protein manufacture. B.) Robert Brown discovered Nucleus in 1835.

A. Both a, b are correct

B. a correct, b incorrect

C. b correct, a incorrect

D. Both a,b are incorrect

Answer:

120. Read the following statements. A.) Cell wall is made up of cellulose and it is dead in nature. B.) Plasma membrane is made up of lipids and proteins and it is living.

A. Both a, b incorrect

B. a correct, b incorrect

C. b correct, a incorrect

D. Both a,b correct

Answer:

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121. The plants which we can observe more chloroplasts are:-

A. Algae

B. Fungi

C. Bacteria

D. None

Answer:

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122. The organell present in the centre of the cheek cell is

A. Mitochondria

B. Golgi

C. Nucleus

D. Ribosomes

Answer:

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123. The stain used to observe nucleus in cheek cells is

A. Safranine

B. Methylene blue

C. Black dye

D. All the above

Answer:

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124. Which solution is used to observed mitochondria under the microscope?

A. Janus green – B

B. Safranine

C. Glycerine

D. Methylene Blue

Answer:

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125. Which colouring reagent used in your classroom to see nucleus?

A. Phenolpthalene

B. Methylene blue

C. Alcohol

D. Glycerine

Answer:

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126. The Red blood cells have less life span because

A. Presence of haemoglobin

B. Presence of nucleus

C. Absence of nucleus

D. Presence of nucleolus

Answer:

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127. Packing of various substances in the cell are

A. Nucleus

B. Mitochondria

C. Golgi apparatus

D. Plastids

Answer:

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128. The organell which generate and stores energy is

A. Golgi

B. Mitochondria

C. Nucleus

D. Ribosomes

Answer:

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129. What is the reason for colour change in tomatoes? (green-white-yellow- red)

A. Endoplasmic reticulum

B. Plastids

C. Nucleolus

D. Cell membrane

Answer:

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130. Cell theory was proposed by

A. Schleiden

B. Schwann

C. Both A& B

D. Rudolf Virchow

Answer:

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131. Arrange the following in correct order

A. Tissue-organism-organs-organ system-cell

B. Organism-organs-organ system-tissue-cell

C. Cells- tissue- organs-organ system-organism

D. None of the above

Answer:

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132. The function of a tiny cell in a large body of an organism is

A. Functional unit

B. Structural unit

C. Acts as individual unit

D. All of the above

Answer:

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133. I appreciate stomata because they are helpful in

A. Photosynthesis

B. Respiration

C. Transpiration

D. All the above

Answer:

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134. The function of cell wall in plants is

A. In active

B. Protection

C. Exerts pressure

D. B and C

Answer:

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