



BIOLOGY

BOOKS - MODERN PUBLICATION

CELL : THE UNIT OF LIFE

Example

1. Which of the following is not correct?

A. Robert brown discovered the cell

B. Schleiden and Schwann formulated the cell theory

C. Virchow explained that cells are formed from pre-existing cells

D. A unicellular organism carries out its life activities within a single cell

Answer:



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2. New cells generate from:

- A. Bacterial fermentation
- B. Regeneration of old cells
- C. Pre-existing cells
- D. Abiotic materials

Answer:



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3. What is a mesosome in a prokaryotic cell?

Mention the functions that it performs.



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4. How do neutral solutes move across the plasma membrane? Can the polar molecules also move across it in the same way? If not, then how are these transported across the membrane?



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5. Name two cell-organelles that are double membrane bound. What are the characteristics of these two organelles? State their functions and draw labelled diagrams of both.



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6. What are the characteristics of prokaryotic cells?



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7. Multicellular organisms have division of labour. Explain.



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8. Cell is the basic unit of life. Discuss in brief.



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9. What are nuclear pores? State their function.



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10. Both lysosomes and vacuoles are endomembrane structures, yet they differ in terms of their functions. Comment.



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11. Describe the structure of the following with the help of labelled diagrams: Nucleus



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12. Describe the structure of the following with the help of labelled diagrams
Centrosome



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13. What is a centromere? How does the position of centromere form the basis of classification of chromosomes. Support your answer with a diagram showing the position of centromere on different types of chromosomes.



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Exercise

1. Who coined the word 'Cell'?



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2. Who called the protoplasm as the physical basis of life?



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3. What was the most generalisation of cell biological of 19th century?



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4. Who proposed the cell theory ?



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5. Who stated 'Omnis cellula-e-cellula'?



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6. What substance was earlier given the name sarcode?



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7. Who coined the terms cytoplasm and nucleoplasm?



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8. What is the structural and functional unit of life ?



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9. Name the largest animal cell and plant cell.



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10. Name two types of cells.



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11. How does the nucleus of a prokaryotic and a eukaryotic cell differ from each other?



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12. Give nature of ribosomes in two types of cells.



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13. Define cyclosis.



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14. List two differences between a plant cell and an animal cell.



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15. Expand the term PPLO.



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16. Who first time discovered the bacteria?



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17. Name four types of bacteria on the basis of their shape.



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18. What are three layers of cell envelope of a bacterium?



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19. What is peculiar feature of bacterial cell wall?



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20. Why is plasma membrane of bacterium also called respiratory membrane?



Watch Video Solution

21. What are mesosomes? State their function.



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22. Which type of ribosomes are found in bacterial cytoplasm?



Watch Video Solution

23. Define polysome.



Watch Video Solution

24. Give nature of nucleoid of bacterium.



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25. Give the term for the extranuclear rings of DNA molecules.



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26. List one difference between flagellum of a bacterial cell and that of a eukaryotic cell.



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27. What is the nature of plasma membrane ?



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28. Why are phospholipid molecules called amphipathic molecule?



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29. Who coined the term unit membrane?



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30. Who proposed fluid mosaic model of plasma membrane?



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31. State the fluid mosaic model in one line?



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32. Why is plasma membrane called quasi-fluid membrane?



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33. Which two types of proteins are present in plasma membrane?



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34. Why is the plasma membrane called selectively permeable membrane ?



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35. Name two types of processes involved in transport of materials across the plasma membranes



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36. Why is plasma membrane called a selectively permeable membrane?



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37. Name various physical processes involved in transport of materials.



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38. Name various active processes involved in transport of materials.



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39. Define diffusion. Give one example of it in a living system.



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40. What is osmosis.? Name one experiment by which it can be demonstrated.



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41. How is facilitated diffusion different from diffusion?



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42. Give one major difference between active processes and passive processes.



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43. What is endocytosis? Name two processes of endocytosis.



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44. Differentiate Pinocytosis and phagocytosis.



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45. Define exocytosis. Give one example of it.



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46. Give the occurrence of cell wall.



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47. List one major difference between primary cell wall and secondary cell wall.



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48. What is suberinization? Give its significance.



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49. What is middle lamella?



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50. Give the period of formation of new cell wall.



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51. Name the major chemical compounds present in the cell wall.



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52. What are cell organelles?



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53. Name two types of ER. Give one major difference between them. Name three type of elements of ER.



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54. Write one function of SER.



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55. Give one major function of RER.



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56. Why are ribosomes called RNP particles?



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57. Name two types of ribosomes. Give their occurrence.



[Watch Video Solution](#)

58. Define polysome.



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59. Why are the ribosomes called protein-factories of the cell?



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60. Who discovered Golgi body?



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61. What are dictyosomes?



Watch Video Solution

62. Name three types of elements of Golgi body.



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63. List two major functions of Golgi body.



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64. Why is the lysosome called a polymorphic organelle?



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65. Which part of spermatozoan is formed of Golgi apparatus?



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66. Which cell organelle is called suicidal bag?



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67. What is residual body?



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68. Why are the lysosomes called acidic hydrolases?



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69. What is autolysis?



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70. Who discovered the mitochondria?



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71. Who coined the term mitochondrion?



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72. Why are the mitochondria more in growing, dividing and active cells?



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73. What are cristae? Give their function.



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74. Define oxysomes.





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75. What are mitochondria?



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76. Why are the organelles called ATP particles?



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77. Why do we believe chloroplast and mitochondria to be semi-autonomous organelle?



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78. Why are mitochondria called "power house of cell" ?



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79. Distinguish between

leucoplasts and Chromoplast



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80. Name the stored food of amyloplasts, aleuroplasts and elaioplasts.



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81. What are plastidoribosomes?



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82. Name the structure and functional elements of chloroplasts.



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83. What are quantasomes? Why are these called photosynthetic units?



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84. What is a granum?



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85. Why are the plastids called kitchens of the cell?



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86. Which cell organelle is called cell centre?



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87. Fill in the blanks:

.....is the basic arrangement of microtubules in cilia and flagella.



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88. Give the chemical nature of the microtubules.



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89. Give the main function of centrioles.



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90. What do you mean by diplosome?



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91. Which structure is called ciliated centriole?



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92. List one major difference between centriole and basal body.



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93. What is the arrangement of microtubules in cilia and flagella?



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94. Give one difference between beating of cilia and flagella.



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95. What is synchronous beating of cilia?



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96. List two functions of microtubules.



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97. Differentiate between the chemical nature of microtubules and microfilaments.



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98. Which structure help in cyclosis of cytoplasm and cleavage of cell?



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99. Non-living cytoplasmic structures.



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100. Exerts turgor pressure and stores water ,minerals, wastes, etc.



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101. Define osmoregulation.



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102. Plants = starch, Animals = glycogen.



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103. Cystoliths are crystals of calcium carbonate, while raphides are crystals of calcium oxalate.



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104. Who discovered nucleus?



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105. Why is nucleus called director of cell ?



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106. Give the nature of nucleus in the prokaryotic cells.



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107. What do you mean by syncytial nature of cell?



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108. Name four components of the nucleus.



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109. What is nuclear-pore complex?



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110. How does outer nuclear membrane differ from inner nuclear membrane?



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111. Give two functions of nuclear membrane.



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112. List two functions of nucleolus.



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113. What is nucleolar-organizer region (NOR)?



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114. Name two cellular structures which have no limiting membrane.



[Watch Video Solution](#)

115. List two functions of nucleolus.



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116. Who coined the term chromosome?



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117. Differentiate between Euchromatin and Heterochromatin.



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118. What are SAT-chromosomes?



Watch Video Solution

119. Define Nucleosome.



Watch Video Solution

120. Name four types of chromosomes on the basis of position of centromere.



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121. A Common characteristic feature of plant sieve tube cells and most of mammalian erythrocytes is

- A. Absence of mitochondria
- B. Presence of cell wall
- C. Presence of haemoglobin
- D. Absence of nucleus

Answer:



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122. Select one which is not true for ribosome

- A. Made of two sub units
- B. Form polysome
- C. May attach to mRNA
- D. Have no role in protein synthesis

Answer:



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123. Which one of these is not a eukaryote?

A. Euglena

B. Anabaena

C. Spirogyra

D. Agaricus

Answer:



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124. Which of the following dye is best suited for staining chromosomes?

- A. Basic Fuchsin
- B. Safranin
- C. Methylene blue
- D. Carmine

Answer:



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125. Different cells have different sizes.

Arrange the following in an ascending order of their size. Choose the correct option among the followings

A. Mycoplasma

B. Ostrich eggs

C. Human RBC

D. Bacteria

Answer:



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126. Which of the following features is common to prokaryotes and many eukaryotes?

- A. Chromosomes present
- B. Cell wall present
- C. Nuclear membrane present
- D. Sub-cellular organelles present

Answer:



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127. Who proposed fluid mosaic model of plasma membrane?

- A. Camillo Golgi
- B. Schleiden and Schwann
- C. Singer and Nicolson
- D. Robert Brown

Answer:



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128. Which of the following statements is true for a secretory cell?

A. Golgi apparatus is absent

B. Rough Endoplasmic Reticulum (RER) is easily observed in the cell

C. Only smooth Endoplasmic Reticulum (SER) is present

D. Secretory granules are formed in nucleus

Answer:



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129. What is a tonoplast?

- A. Outer membrane of mitochondria
- B. Inner membrane of chloroplast
- C. Membrane boundary of the vacuole of
plant cells
- D. Cell membrane of a plant cell

Answer:





130. Which of the following is not true of a eukaryotic cell?

A. It has 80S type of ribosome present in the mitochondria

B. It has 80S type of ribosome present in the cytoplasm

C. mitochondria contain circular DNA

D. Membrane bound organelles are present

Answer:



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131. Which of the following statements is not true for plasma membrane?

A. It is present in both plant and animal cell

B. Lipid is present as a bilayer in it

C. Proteins are present integrated as well as loosely associated with the lipid bilayer.

D. Carbohydrate is never found in it

Answer:



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132. Plastid differs from mitochondria on the basis of one of the following features. Mark the right answer

A. Presence of two layers of membrane

B. Presence of ribosome

C. Presence of chlorophyll

D. Presence of DNA

Answer:



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133. Which of the following is not a function of cytoskeleton in a cell?

A. Intracellular transport

B. Maintenance of cell shape and structure

C. Support of the organelle

D. Cell motility

Answer:



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134. The stain used to visualise mitochondria is

- A. Fast green
- B. Safranin
- C. Acetocarmine
- D. Janus green

Answer:



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135. What is the significance of vacuole in a plant cell?



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136. What does 'S' refer in a 70S & 80S ribosome?



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137. Mention a single membrane bound organelle which is rich in hydrolytic enzymes.



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138. What are gas vacuoles? State their functions?



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139. What are the functions of a polysome?



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140. What is the feature of a metacentric chromosome?



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141. What is referred to as satellite chromosome?



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142. Discuss briefly the role of nucleolus in the cells actively involved in protein synthesis.



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143. Explain the association of carbohydrates to the plasma membrane and its significance.



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144. Comment on the cartwheel structure of centriole .



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145. Briefly describe the cell theory.



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146. Differentiate between Rough Endoplasmic Reticulum (RER) and Smooth Endoplasmic

Reticulum (SER).



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147. Give the biochemical composition of plasma membrane. How are lipid molecules arranged in the membrane?



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148. What are plasmids? Describe their role in bacteria.



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149. What are histones? What are their functions?



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150. What are structural and functional attributes must a cell have to be called a living cell?



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151. Briefly give the contributions of the following scientists in formulating the cell theory

Rudolph Virchow



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152. Is extra genomic DNA present in prokaryotes and eukaryotes? If yes, indicate their location in both the types of organisms.



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153. Structure and function are correlatable in living organisms. Can you justify this by taking plasma membrane as an example?



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154. Eukaryotic cells have organelles which may:
bound by a double membrane

Group the various sub-cellular organelles into these three categories



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155. The following ratio is generally constant for a given species :



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156. Justify the statement, "Mitochondria are power houses of the cell".



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157. Is there a species specific or region specific type of plastids? How does one distinguish from the other?



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158. Write the functions of the following :

Centrioles



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159. Write the functions of the following :

cell wall



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160. Write the functions of the following :

Smooth ER



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161. Write the functions of the following :

Golgi Apparatus



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162. Write the functions of the following :

Centrioles



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163. Are the different types of plastids interchangeable? If yes, examples where they are getting converted from one type to another.



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164. Which type of enzyme are present in the lysosomes?



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165. Why are phospholipid molecules called amphipathic molecule?



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166. Enlist two peculiar characters of prokaryotic cell.



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167. What is chemical nature of ribosomes?





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168. Which type of ER is well developed in lipid synthesizing and protein synthesizing cells?



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169. What do you mean by "omnis cellula e cellula".



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170. What is the relationship between cell size and metabolic rate?



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171. State one difference between cell wall of bacterium and plant cell.



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172. What a facilitated diffusion?



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173. Name two semiautonomous cell organelle?



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174. Give microtubular arrangement of centriole and cilium.



Watch Video Solution

175. Give the function of peroxisomes.



Watch Video Solution

176. Why is nucleus called director of cell ?



Watch Video Solution

177. Give the technical term for the darkly stained and transcriptionally inactive part of chromatin.



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178. State one difference between cystoliths and raphides.



[Watch Video Solution](#)

179. Differentiate gram positive and gram negative bacteria.



[Watch Video Solution](#)

180. Who proposed fluid mosaic model of plasma membrane?



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181. Give significance of osmosis.



Watch Video Solution

182. Differentiate Pinocytosis and phagocytosis.





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183. List the objectionable postulate of theory.
In which way, it was modified in cell principle?



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184. Give one major difference between SER
and RER.



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185. What is nucleosomes ? Give its chemical nature.



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186. Differentiate between mitochondrion and a bacterium.



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187. What do you understand by active transport across a cell membrane? Explain

with one example.



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188. Enlist the main postulates of cell theory.

Who proposed the cell theory ?



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189. Discuss the relationship between cell size and its exchanging power.



[Watch Video Solution](#)

190. Differentiate between prokaryotic and eukaryotic cells.



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191. Enlist the functions of endoplasmic reticulum.



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192. Draw a diagram showing structure of chloroplast.



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193. Why is plasma membrane called a semipermeable membrane? Give its significance.



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194. Explain the structure and functions of collenchyma.



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195. Give the historical hierarchy of cell



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196. Give an account of prokaryotic cell.



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197. Show polymorphism in lysosome with the help of sketch only (no description)



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198. Explain fluid mosaic model?



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199. Enumerate the structure and functions of true nucleus.



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200. Centriole has $9 + 2$ microtubular arrangement while cilium has $9 + 0$ microtubular arrangement.



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201. Transcriptionally inactive chromatin is called heterochromatin.



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202. "Cell within the cell" is stated for mitochondria and chloroplasts.



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203. What are lipid storing plastids ?



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204. where ETS enzymes are located on mitochondria ?



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205. The prokaryotes have both 70S and 80S ribosomes.



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206. In prokaryotic cells, respiratory enzymes are located on plasma membrane.



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207. Genophore is another name of nucleoid of prokaryotic cells.



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208. Solid particles are ingested by pinocytosis.



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209. Membrane are useful for compartmentalisation of cells.



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210. Phospholipids molecule is an amphipathic molecule.



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211. Diffusion and facilitated diffusion is a passive process.



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212. Functional part of DNA is called euchromatin, while non-functional part is called heterochromatin.



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213. Structural and functional units of chloroplasts are grana.



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214. Why are ribosomes called RNP particles?



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215. are the stacks of closely packed thylakoids.



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216. Type ribosomes are found in the prokaryotes, whiletype ribosomes are

found in eukaryotes.



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217.surrounds the central vacuole.



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218. Non-living structures of the cytoplasm are called



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219.is metal ion present at the centre of chlorophyll.



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220. Starch storing plastids are called.....



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221. Extensive infoldings of mitochondrial membrane are.....



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222. Transcriptionally active chromatin is called.....



[Watch Video Solution](#)

223. Chemically, the ribosomes are formed ofand



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224. Stalked particles on the inner mitochondrial membrane are.....



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225.microtubular arrangement is found in the cilium, while..... Microtubular arrangement is found in the centriole.



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226. Fill in the blanks

Power house of the cell is



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227. The acrosome of the sperm is formed
from.....



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228. Single membrane bound organelles areand



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229. Name the following: Structural and functional units of the nervous system



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230. Naked and circular DNA molecules are found in.....



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231. Hydrolytic enzymes are located in



Watch Video Solution

232. An organelles without a limiting bags of the cell.



Watch Video Solution

233. Smallest sized prokaryote is



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234. Passive transport includes
and.....



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235. Active intake of macromolecules and particulate materials by the cell is called.....



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236. Shrinking of a plant cell in a hypertonic solutions is called.....



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237. Is an amphipathic molecule.



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238. Exchange of gases at lung alveoli occurs bywhile intaking of glucose by a cell occurs by.....



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239. Living cytoplasmic structures are called cell organelles/cell inclusions.



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240. Nucleiod is found in prokaryotic cells/eukaryotic cells.



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241. Ingrowths of plasma membrane of a bacterium are called polysome/mesomes.



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242. Long seised and tubular structures found in Gram-ve bacteria and helping in conjugation are called pili/fimbriae.



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243. Proteins form about 59%/40% of plasma membrane.



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244. Water resistant barrier of plasma membrane is formed by protein/phospholipid molecules.



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245. If a cell is placed in hypotonic solution, what will happen ?



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246. ER/Golgi complex is involved in glycosylation of proteins.



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247. Naked sub-cellular organelle is lysosome/ribosome.



Watch Video Solution

248. Enzymes of Kreb's cycle are found in outer chamber/inner membrane of mitochondrion.



Watch Video Solution

249. Light-independent reaction of photosynthesis occur in thylakoids/stroma of chloroplast.



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250. 9 + 2 microtubular arrangement is found in Basal body/ flagellum.



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251. Gas vacuoles /contractile vacuoles help in osmoregulation.



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252. Lightly stained and transcriptionally active part of chromatin is called euchromatin/heterochromatin.



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253. A chromosome with a centromere near its called
Acrocentric/metacentric/submetacentric
chromosomes.



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254. What does " Theory of Lineage" state?

Give its significance.



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255. Name the three basic components of cell.



Watch Video Solution

256. Differentiate between prokaryotic and eukaryotic cells.



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257. Why is plasma membrane of bacterium also called respiratory membrane?



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258. What are mesosomes? State their function.



Watch Video Solution

259. Define nucleoid.



Watch Video Solution

260. Give the term for the extranuclear rings of DNA molecules.



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261. How does the bacterial flagellum differ from that of eukaryote?



[Watch Video Solution](#)

262. What are hemipens? Give their function.



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263. Differentiate gram positive and gram negative bacteria.



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264. What is the main feature of the plasma membrane?



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265. Why are phospholipid molecules called amphipathic molecule?



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266. Who proposed fluid mosaic model of plasma membrane?



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267. Why is the plasma membrane called selectively permeable membrane ?



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268. Differentiate passive transport and active transport.



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269. Define osmosis. What is the difference between osmosis and diffusion ?



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270. Differentiate Pinocytosis and phagocytosis.



Watch Video Solution

271. List one major difference between primary cell wall and secondary cell wall.



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272. What is chemical nature of middle lamella?



Watch Video Solution

273. Define cyclosis.



Watch Video Solution

274. Name three elements of ER.



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275. Which organelle act as intracellular circulatory system?



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276. Name two subunits of 80S and 70S ribosomes.



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277. Which organelle is called "engine of the cell"?



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278. Give the significance of glycocalyx.



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279. Name two semi-autonomous cell organelles.



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280. List two types of chromatin.



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281. Name which cell organelle is associated with secretory activity of cell?



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282. Name the cell organelles bounded by single unit membrane.



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283. Which structure is called "little nucleus"?



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284. Name two types of giant chromosomes.



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285. Which organelle shows polymorphism?



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286. What is chemical nature of ribosomes?



[Watch Video Solution](#)

287. What is polyribosomes ?



[Watch Video Solution](#)

288. What are cytoskeletal structures?



[Watch Video Solution](#)

289. Who proposed the cell theory ?



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290. What will you call a cell not having ER, Golgi body, mitochondria, nuclear membrane etc?



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291. What is the main difference between cell organelles and cell inclusions ?



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292. Name the three components of Golgi body.



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293. Define sarcoplasmic reticulum.



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294. What is glycosylation?





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295. Recall that 0.9% NaCl and 5% glucose solution are isotonic to human erythrocytes. Considered each of the following solution. Indicate whether it is hypertonic, hypotonic or isotonic? What sort of change will occur when erythrocytes are placed in it?

5% NaCl



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296. A solution of sucrose (molar mass = 342g mol^{-1}) is prepared by dissolving 68.4 g of it per litre of solution. What is the osmotic pressure at 300K?



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297. When a 5% glucose solution and an 8% glucose solution are separated by semi-permeable membrane, explain (ii) In which direction osmosis occurs ?





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298. When a 5% glucose solution and an 8% glucose solution are separated by semi-permeable membrane, explain (iii) Which solution will increase in volume?



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299. Give one major difference between SER and RER.



[Watch Video Solution](#)

300. Name two cellular structures which are not covered by any unit membrane.



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301. What are dictyosomes?



Watch Video Solution

302. Why are lysosomes called 'suicidal bags' ?



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303. Why are the lysosomes called acidic hydrolases?



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304. Give the location of oxysomes.



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305. Comment "Mitochondria are semiautonomous bodies."



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306. Name three types of leucoplasts.



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307. Name the structure and functional elements of chloroplasts.



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308. Name the ear ossicles in the order of arrangement in human ear. What role do they play in hearing?



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309. List one major difference between centriole and basal body.



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310. State the differences between cilia and flagella.



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311. What is a tonoplast?



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312. Which cellular structure is called "director of the cell"?



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313. What is nature of nuclear membrane ?



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314. Name four types of chromosomes on the basis of position of centromere.



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315. Differentiate between Euchromatin and Heterochromatin.



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319. Differentiate between prokaryotic and eukaryotic cells.



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320. Name four types of bacteria on the basis of their shape.



[Watch Video Solution](#)

321. Draw a neat and labelled diagram of a sarcomere.



[Watch Video Solution](#)

322. Give nature of nucleoid of bacterium.



Watch Video Solution

323. What is the significance of diffusion?



Watch Video Solution

324. Differentiate diffusion and active absorption.



Watch Video Solution

325. What is a depressant ? Give one example.



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326. What is advantage of fluid-mosaic model over other models of plasma membrane?



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327. List two differences between a plant cell and an animal cell.



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328. Why is ER called cell circulatory system?



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329. Give three difference between 70S and 80S ribosomes.



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330. What are difference between autophagy and autolysis?



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331. Name the structure and functional elements of chloroplasts.



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332. Why is basal body called ciliated centriole?



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333. Differentiate leucoplasts and chromoplasts.



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334. List one major difference between primary cell wall and secondary cell wall.



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335. What are isotonic, hypertonic and hypotonic solutions.



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336. Differentiate passive transport and active transport.



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337. Define middle lamella. Give its chemical nature and function.



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338. Differentiate between cell organelles and autophagy.



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339. How do outer membrane and inner membrane of the mitochondria differ from each other?



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340. Draw a neat and labelled sketch of a plastid.



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341. List one major difference between centriole and basal body.



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342. List the functions of vacuoles.



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343. Differentiate between Euchromatin and Heterochromatin.



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344. What are desmotubules? Give their function.



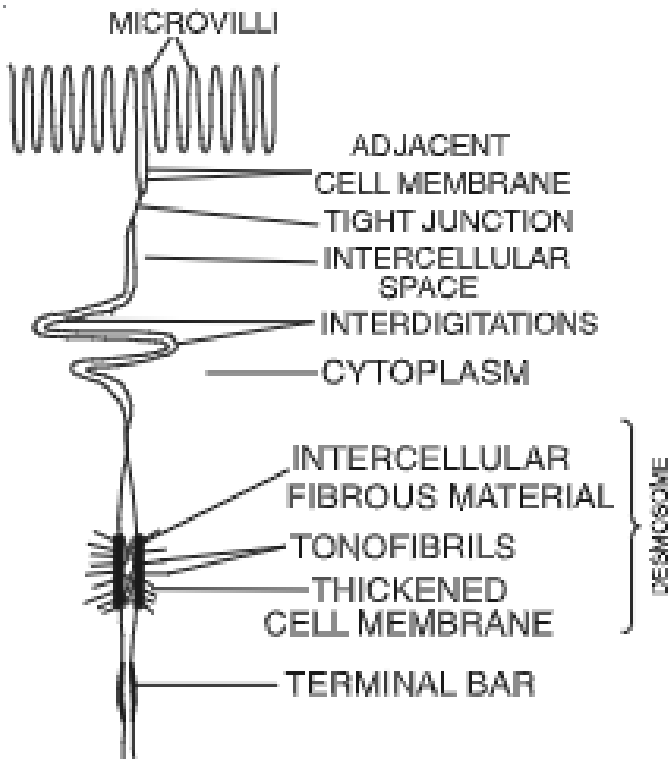
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345. Which cellular structure act as: cell circulatory system, protein factories, power houses, kitchens of the cell, ciliated centriole and disposal units.



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346. Show the various modifications of plasma membrane with the help of sketch.



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347. Give three functions of nucleus.



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348. Draw well labelled diagram of TMV.



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349. Why are membranes described as "proteins in a sea of lipids?" Explain this statement with an example.



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350. In a reaction, potassium manganate is converted into $KMnO_4$, the oxidation number of Mn in $KMnO_4$ increases by



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351. The appearance of yellow edges to leaves is due to deficiency of this mineral element,



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352. Differentiate between: (i) Osmosis and endosmosis.



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353. Differentiate between: Exocytosis and endocytosis.



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354. Differentiate between: Exosmosis and endosmosis.



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355. List two differences between a plant cell and an animal cell.



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356. What would be the molar concentration of human DNA in a human cell? Consult your teacher.



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357. Give an account of granulocytes.



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358. What is the main function of ribosomes?



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359. Write the structure and functions of chloroplast.



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360. Differentiate cytoplasm and nucleoplasm.



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361. Differentiate between :(b)Chromatin and chromosomes.



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362. Differentiate between Euchromatin and Heterochromatin.



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363. Describe the mechanism of enzyme action.



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364. Distinguish between :Extrinsic and intrinsic proteins



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365. Distinguish between :(ii) Primary and secondary lysosomes.



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366. List two major functions of Golgi body.



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367. Name various modifications of plasma membrane. Explain microvilli.



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368. Give the cytological term for the following:

(i) Transcriptionally active part of chromatin.

(ii) Structural and functional units of chromatin.

(iii) Chromosome with subterminal centromere.



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369. Who proposed the unit membrane concept?



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370. Describe the structure of nucleus. Write its functions.



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371. Give an account of cell theory.



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372. Enumerate the cell organelles present in an Eukaryotic cell. Give functions of each.



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373. What is active transport ?



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374. Give an account on structure and function of cell wall.



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375. Write the structure and functions of chloroplast.



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376. Describe the osmotic behaviour of plant cell.



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377. Give the primary function of Golgi body.



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378. Presence of endomembrane system is peculiar structural property of eukaryotic cells

as it is absent from the prokaryotic cells.

Discuss the following questions:

(a) What are components of endomembrane system of eukaryotic cell?



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379. Presence of endomembrane system is peculiar structural property of eukaryotic cells as it is absent from the prokaryotic cells.

Discuss the following questions:

(b) Why these components are considered as an endomembrane system?



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380. What are the structural characteristics of:
meristematic cells near root tip



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381. Plasma membrane is a lipoproteinous and trilaminar membrane. It regulates the

exchange of materials between the cytosol and extra-cellular medium. Give the reasons for the following:

(a) What do you mean by lipoproteinous and trilaminar nature of plasma membrane?



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382. Plasma membrane is a lipoproteinous and trilaminar membrane. It regulates the exchange of materials between the cytosol and extra-cellular medium. Give the reasons

for the following:

(b) Phospholipids are called amphipathic molecules. Why?



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383. Plasma membrane is a lipoproteinous and trilaminar membrane. It regulates the exchange of materials between the cytosol and extra-cellular medium. Give the reasons for the following:

(C) Why the plasma membrane is said a selectively permeable membrane?



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384. Plasma membrane is a lipoproteinous and trilaminar membrane. It regulates the exchange of materials between the cytosol and extra-cellular medium. Give the reasons for the following:

(e) Enlist two differences between passive and active transport.



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385. Plasma membrane is a lipoproteinous and trilaminar membrane. It regulates the exchange of materials between the cytosol and extra-cellular medium. Give the reasons for the following:

(e) Enlist two differences between passive and active transport.



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386. The class teacher focussed a cell under the high power of a compound microscope. He asked the students to identify the cell Whether it is a prokaryotic or eukaryotic cell. Some students identified it as a prokaryotic cell. Discuss the basis of his conclusion.



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387. A major break through in the studies of cells came with the development of electron

microscope. This is because:

- A. The resolution power of the EM is much higher than that of light microscope
- B. The resolving power of the EM is 200-350 nm as compared to 0.1-0.2 nm for the light microscope
- C. Electron beam can pass through thick materials, whereas light microscopy requires thin sections

D. The EM is more powerful than the light microscope as it uses a beam of electrons which has wavelength much longer than that of protons.

Answer:



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388. Which of the following statements regarding fats is true?

A. Outer membrane is permeable to all kinds of molecules

B. Enzymes of the ETC are embedded in the outer membrane.

C. Inner membrane is highly convoluted froming a series of infoldings

D. outer membrane resemble a sieve

Answer:



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389. Which of the following statements regarding cilia is true?

A. The organised beating of cilia is controlled by fluxes of Ca^{2+} across membrane

B. Microtubules of cilia are composed of tubulin

C. Cilia contain an outer ring of nine doublet microtubules surrounding two single microtubules

D.

Answer:



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390. The vacuole is lined by a membrane called:

A. Tonoplast

B. Jacket

C. Cell membrane

D. Tonoplasm

Answer:



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391. Spindle fibres are made up of :

A. Tubulin

B. Humulin

C. Intermediate filament

D. Flagellin

Answer:



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392. What is common between chloroplasts, chromoplasts and leucoplasts?

- A. Presence of pigments
- B. Possession of thylakoids and grana
- C. Storage of starch, protein and lipids

D. Ability to multiply by a fission-like process

Answer:



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393. t-RNA is synthesized by :

A. Nucleus

B. Nucleolus

C. Cytoplasm

D. Endoplasmic reticulum

Answer:



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394. The biomembrane tonoplast is :

- A. Covering of cell wall
- B. Covering of nucleus
- C. Covering of mitochondria
- D. Covering of vacuole

Answer:



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395. Cell drinking is :

- A. Exocytosis
- B. Pinocytosis
- C. Phagocytosis
- D. None of these

Answer:



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396. Subcellular organelle is:

A. Peroxisome

B. Ribosome

C. Plastids

D. Lysosomes

Answer:



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397. Golgi body is associated with:

- A. Packing and storing of materials
- B. Cell plate formation
- C. Secretion of different substances
- D. All of the above

Answer:



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398. Acrosome is formed from:

A. Golgi body

B. Ribosome

C. Lysosome

D. ER

Answer:



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399. What does a cell show if placed in a sea water?

- A. Plasmolysis
- B. Reverse osmosis
- C. Deplasmolysis
- D. None of these

Answer:



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400. The cell wall of eukaryotic organisms is made up of :

- A. Hemicellulose + pectin
- B. Hemicellulose + pectin + cellulose
- C. Hemicellulose + lipids
- D. Hemicellulose + chitin

Answer:



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401. The bacterial cell wall is made up of :

A. Cellulose

B. Hemicellulose

C. Cellulose and hemicellulose

D. Peptidoglycan

Answer:



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402. Which of the following subunit of ribosomes is composed of 23S rRNA and a 5S rRNA + 32 different proteins?

A. 50S

B. 70S

C. 30S

D. 60S

Answer: 40S



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403. Solenoid is a structure of :

A. Nucleosomal organization with 10 nm thickness

B. Condensed chromatin fibre with 30 nm diameter

C. Highly condensed form of chromatid with 300 nm diameter

D. Well organized chromatid with 700 nm thickness

Answer: Well organized chromososome with 1400 nm thickness



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404. Cell wall consists of :

- A. Lignin,hemicellulose,protein and lipid
- B. Hemecellulose,cellulose,tubulin and ligin
- C. Ligin,hemicellulose,protein and lipid
- D. Ligin,hemicellulose,pectin and cellulose

Answer:



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405. The term "Cytoplasm" and "nucleoplasm" were given by:

A. Purkinje

B. Strasburger

C. Brown

D. Flemming

Answer:



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406. Cell wall of bacterium is formed of:

- A. Cellulose
- B. Hemicellulose
- C. lignin
- D. Glycogen

Answer: Peptidoglycan



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407. Which of these is mismatched?

A. Amyloplasts = store protein granule

B. Elaioplasts = Store lipids

C. Chromoplasts = contain non-chlorophyll
coloured pigments

D. Chloroplasts = Contain chlorophyll
pigments

Answer: Leucoplasts = contain colourless pigments



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408. Cristae are associated with :

- A. Endoplasmic reticulum
- B. Mitochondria
- C. Cytoplasm
- D. Protoplasm

Answer:



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409. Centrosome is not present in the cells of:

- A. Higher plants
- B. Lower plants
- C. Higher animals
- D. Lower animals

Answer:



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410. A cell swells up when kept in :

- A. Isotonic solution
- B. Hypertonic solution
- C. Hypotonic solution
- D. Any of these

Answer:



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411. Give the site for protein synthesis.

A. Ribosome

B. SER

C. Golgi body

D. Lysosomes

Answer:



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412. Which of the following is a prokaryote?

A. Amoeba

B. Spirogyra

C. Bacteria

D. Chlamydomonas

Answer:



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413. The mineral present in the cell wall is :

A. Na

B. Ca

C. K

D. Mg

Answer:



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414. Name the theory proposed by Dixon for ascent of sap.

A. Virchow

B. Schleiden and Schwann

C. Robert Hooke

D. B. McClintock

Answer:



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415. Which organelles is present in more number in secretory cells?

A. Dictyosomes

B. ER

C. Lysosome

D. Vacuole

Answer:



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416. Acid hydrolase is found in:

A. Golgi body

B. ER

C. Lysosome

D. Vacuole

Answer:



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417. RNA is not found in :

A. Chromosome

B. Plasmalemma

C. Nucleolus

D. Ribosome

Answer:



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418. A chromosome having centromere at its middle is:

A. Telocentric

B. Acrocentric

C. Metacentric

D. Dicentric

Answer:



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419. The hypothesis that "Life originated from pre-existing non-living organic molecules" was proposed by

A. Singer and Nicolson

B. Davidson and Danielli

C. Robertson

D. Watson and Crick

Answer:



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420. An enzyme which increases the rate of permeability across the PM is :

A. Permease

B. Catalase

C. Gelatinase

D. Amylase

Answer:



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421. The bacterial cell wall is made up of :

A. Chitin

B. Murein

C. Pectin

D. Cellulose

Answer:



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422. The two subunits of ribosomes remain united at a critical ion level of:

A. Magnesium

B. Calcium

C. Copper

D. Manganese

Answer:



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423. A polysome is formed by:

- A. A ribosome with several subunits
- B. Ribosome attached to each other in a linear manner
- C. Several ribosomes attached to a single mRNA
- D. Many ribosomes attached to ER

Answer:



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424. Vacuole in a plant cell:

A. Lacks membrane and contains air

B. Lacks membrane and contains water and
excretory wastes

C. Is membrane-bound and contains
storage proteins and lipids

D. Is membrane-bound and contains water
and excretory wastes

Answer:



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425. In germinating seeds fatty acids are degraded exclusively in the:

- A. Peroxisome
- B. Mitochondria
- C. Proplastids
- D. Glyoxysomes

Answer:



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426. Which one of the following statements is correct:

A. While proteins can flip-flop lipids cannot

B. Neither proteins nor lipids can flip-flop

C. Both lipids and proteins can flip-flop

D. While lipids can rarely flip-flop, Proteins cannot

Answer:



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427. Flagella of prokaryotic and eukaryotic cells differ in :

- A. Type of movement and placement in cell
- B. Location in cell and mode of functioning
- C. Micro-tubular organisation and type of movement
- D. Micro-tubular organisation and function

Answer:



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428. cytoplasmic inheritance is due to

(1) mitochondria and chloroplast, (2) cilia and flagella, (3) cytoplasmic particles, (4) cells wall and cell coat.

A. 1,2 and 3 are correct

B. 1 and 2 are correct

C. 2 and 4 are correct

D. 1 and 3 are correct

Answer:



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429. Which of the following statements are correct?

A. 1, 2 and 3 are correct

B. 1 and 2 are correct

C. 2 and 4 are correct

D. 1 and 3 are correct

Answer:



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430. Genes present in the cytoplasm of eukaryotic cells, are found in:

A. Mitochondria and inherited via egg cytoplasm

B. Lysosomes and peroxisomes

C. Golgi bodies and smooth reticulum

D. Plastids and inherited via male gametes

Answer:



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431. What is common between chloroplasts, chromoplasts and leucoplasts:

A. Presence of pigments

B. Possession of thylakoids and grana

C. Storage of starch, protei and lipids

D. Ability to multiply by a fission-like
process

Answer:



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432. Cell theory was given :

A. Virchow

B. Schleiden and Schwann

C. Robert Hooke

D. B. McClintock

Answer:



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433. Acid hydrolase is found in:

A. Golgi body

B. ER

C. Lysosome

D. Vacuole

Answer:



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434. The mineral present in the cell wall is :

A. Na

B. Ca

C. K

D. Mg

Answer:



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435. Which organelles is present in more number in secretory cells?

A. Dictyosomes

B. ER

C. Lysosome

D. Vacuole

Answer:



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436. The type of cell junction which facilitates cell to cell communication is:

- A. Tight junction
- B. Adhering junction
- C. Gap junctions
- D. Desmosomes

Answer: Brush border



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437. The phenomenon of plasmolysis is evident when cells are kept in :

- A. Hypotonic solution
- B. Hypertonic solution
- C. Isotonic solution
- D. None of these

Answer:



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438. Site of gluconeogenesis is

- A. Mitochondria
- B. Golgi bodies
- C. Glyoxysomes
- D. None of these

Answer:



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439. The largest subunit of prokaryotic ribosomes is :

A. 30S

B. 40S

C. 50S

D. 60s

Answer:



440. Small particles projecting from the inner membrane and cristate of mitochondria are:

- A. Myeloid bodies
- B. Microsomes
- C. Informmosomes
- D. Oxysome

Answer:



441. There is no DNA in

- A. An enucleated ovum
- B. Mature RBCs
- C. Mature spermatozoan
- D. Hair root

Answer:



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442. Middle lamella is composed mainly of

- A. Hemicellulose
- B. Muramic acid
- C. Calcium pectate
- D. Phosphoglycerides

Answer:



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443. Plasmodesmata are :

A. Lignified cemented layers between cells

B. Locomotory structures

C. Membranes connecting the nucleus

plasmalemma

D. Connections between adjacent

Answer:



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444. Cytoskeleton is made up of:

A. Calcium carbonate granules

B. Callose deposits

C. Cellulose microfilaments

D. Proteinaceous filaments

Answer:



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445. Which of the following four structures is correctly matched with the accompanying description

A. Plasma membrane- Outer layer of cellulose or chitin or absent

B. Mitochondria - Bacteria -like elements with inner membrane forming sac containing Chlorophyll and found in plant cell and algae.

C. Chloroplasts- Bacteria -like elements with inner membrane highly folded

D. Golgi apparatus -stack of flattened vesicles

Answer:



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446. What is correct sequence of the steps given here? Also work out the process depicted in the step:

(i) Homologous chromosomes move towards opposite poles of the cell, chromatids do not separate (ii) Chromosomes gather together at the two poles of the cell and nuclear membranes reformed. (iii) Homologous

chromosomes pair and exchange segments

(iv) Homologous chromosomes align on a

central plate (v) The haploid cells separate

completely

A. The correct sequence is : (iii) → (iv)

→ (i) → (ii) → (v) and the process is

meiosis-I

B. The correct sequence is : (ii) → (i) →

(v) → (iv) → (iii) and the process is

mitosis.

C. The correct sequence is : (iv) \rightarrow (i) \rightarrow

(iii) \rightarrow (ii) \rightarrow (v) and the process is

meiosis-I

D. The correct sequence is : (ii) \rightarrow (v) \rightarrow

(iv) \rightarrow (iv) \rightarrow (i) and the process is

mitosis

Answer:



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447. A cell when kept in sugar solution, gets hydrated. then solution is:

A. Hypotonic

B. Hypertonic

C. Isotonic

D. None of these

Answer:



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448. Desmosomes are:

- A. Connecting bodies between cells
- B. Fat storage cells
- C. Pigments bodies
- D. None of these

Answer:



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449. Fill in the blanks

Power house of the cell is

A. Golgi bodies

B. Mitochondria

C. Ribosomes

D. Endoplasmic reticulum

Answer:



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450. The prokaryotic cells are characterised by:

- A. Presence of distinct nuclear membrane
- B. Absence of chromatin material
- C. Presence of distinct chromosomes
- D. Absence of nuclear membrane

Answer:



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451. The endoplasmic reticulum is in continuation with :

- A. Golgi body
- B. Nuclear membrane
- C. Mitochondria
- D. Cell wall

Answer:



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452. In higher plants, the shape of the chloroplasts is

- A. Discoidal
- B. Cup-shaped
- C. Girdle-shaped
- D. Reticulate

Answer:



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453. The chief component of middle lamella in plant cell is :

A. Potassium

B. Calcium

C. Magnesium

D. Phosphorus

Answer:



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454. The biomembrane tonoplast is :

A. Vacuole

B. Cytoplasm

C. Nucleus

D. Mitochondria

Answer:



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455. A chromosome in which centromere is situated close to its end, so that one arm is very short and other very long:

- A. Acrocentric
- B. Metacentric
- C. Sub-metacentric
- D. Telocentric

Answer:



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456. Most of the enzymes of TCA cycle are present in:

A. Cytoplasm

B. Inner membrane space of mitochondrion

C. Mitochondrial matrix

D. Inner mitochondrial membrane

Answer:



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457. Long , flattened and usually unbranched units arranged in parallel stacks in endoplasmic reticulum are called

A. Cisternae

B. Cristae

C. Vesicles

D. Tubules

Answer:



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458. Plasmolysis is the result of:

A. Exosmosis

B. Endomosis

C. Reverses osmosis

D. Diffusion

Answer:



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459. Flocculation or coagulation of protoplasm

is the :

A. Interchangeability between sol and gel

states

B. Ability to scatter the beam of light

C. Erractic zig-zag movements of

protoplasmic particles

D. Ability of protoplasm to increase in size

when they lose charges

Answer:



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460. Quantasomes are present in :

- A. Chloroplasts
- B. Mitochondria
- C. Golgi body
- D. Lysosomes

Answer:



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461. Which of the following cell organelles stores hydrolytic enzymes ?

- A. Centrioles
- B. Lysosomes
- C. Chromoplasts
- D. Chloroplasts

Answer:



462. An elaborate network of filamentous proteinaceous structures present in the cytoplasm which help in the maintenance of cell shape is called:

- A. Thylakoids
- B. Endoplasmic reticulum
- C. Plasmalemma
- D. Cytoskeleton

Answer:



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463. Degestive enzymes are:

- A. Vacuole
- B. Lysosomes
- C. Golgi bodies
- D. Mitochondria

Answer:



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464. When a fresh- water protozoan is placed in marine water:

A. The contractile vacuoles becomes bigger in size

B. The number of contractile vacuoles increase

C. The contractile vacuoles disappear

D. the contractile vacuoles remain unchanged

Answer:



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465. The term species was given by

A. Strasburger

B. Plowe

C. Hooke

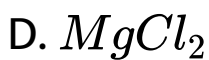
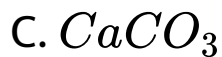
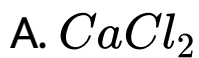
D. Robertson

Answer:



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466. Cystolith contains:



Answer:



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467. Which of the following match is correct ?

- A. Oil storage - Rhodoplast
- B. Protein storage-Amyloplasts
- C. Starch storage - Aleuroplasts
- D. Fat Storage- Elaioplasts

Answer:



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468. The number of microtubules in a flagellum including those sharing three protofilaments with each other is

A. 11

B. 20

C. 22

D. 10

Answer:



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469. How are protoplasm of two adjacent cells connected to each other?

- A. Plasmalemma
- B. Desmosome
- C. Plasmodesmata
- D. Plasmotubule

Answer:



470. The long and short arms of chromosome are designated respectively as:

- A. p and q arms
- B. q and p arms
- C. m and p arms
- D. l and s arms

Answer:



471. The microfilaments of eukaryotic cells are made up of :

A. Actin

B. Albumin

C. Globulin

D. Fibrin

Answer:



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472. Present in nucleus is :

A. Golgi complex

B. Lysosome

C. Mitochondria

D. Chromosome

Answer:



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473. Which of these is wrongly matched?

A. Chloroplasts -Chlorophyll

B. Elaioplasts -starch

C. Chromoplast-carotenoids

D. Amyloplasts- carbohydrates

Answer: Aleuroplast- protiens



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474. Which one of the following organelles is not surrounded by any membrane?

A. Mitochondrion

B. Chloroplast

C. Ribosomes

D. Endoplasmic reticulum

Answer: Vacuole



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475. Which of the following statements are correct and which are incorrect ? Milk is a mixture.

- A. (a) and (b) only correct
- B. (C) and (d) only are correct
- C. (b) and (d) only are correct
- D. (B) and (C) only are correct

Answer:



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476. What is mitoplast?

- A. Membrane less mitochondria
- B. Another name of mitochondria
- C. Mitochondria without outer membrane
- D. Mitochondria without inner membrane

Answer:



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477. Cell theory is not applicable for:

A. Bacteria

B. Fungus

C. Algae

D. Virus

Answer:



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478. Mitochondria are semi-autonomous as they possess:

A. DNA

B. DNA + RNA

C. DNA + RNA + Ribosomes

D. Proteins

Answer:



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479. Cells divide and new cells are formed pre-existing cells. This concept was given by:

A. Malthias Schleiden

B. Theodore Schwann

C. Malthias Schleiden and T. Schwann

D. Riudolf Virchow

Answer:



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480. $Na^+ K^+$ pump in a cell is an example of :

A. Osmosis

B. Diffusion

C. Passive transport

D. Active transport

Answer:



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481. Active transport is characterized by :

A. Requires special membrane protein

B. Highly selective

C. Requires ATP's energy

D. All of these

Answer:



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482. A typical nucleosomes contains:

A. 100 bp of DNA helix

B. 200 bp of DNA helix

C. 300 bp of DNA helix

D. 400 bp of DNA helix

Answer:



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483. The cell membranes of the tadpole adjacent cells are fused at this cell junction:

- A. Macula adherens
- B. Zonula adherens
- C. Zonula occuludents

D. Nexus

Answer:



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484. Disappearance of the tadpole tail during metamorphosis is brought about by :

A. Endoplasmic reticulum

B. Golgi bodies

C. Lysosome

D. Peptidoglycan

Answer:



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485. Important site of formation of glycoproteins and glycolipids is:

A. Vacuole

B. Golgi apparatus

C. Plastids

D. Lysosomes

Answer:



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486. Peptide synthesis inside a cell takes place
in :

A. Chloroplast

B. Mitochondria

C. Chromoplast

D. Ribosomes

Answer:



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487. What are those structures which appear as "beads- on -string" in the chromosomes when viewed under electron microscope?

A. Genes

B. Nucleus

C. Ribosomes

D. Cell wall

Answer:



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488. Two percent solution of NaOH as compared to 18 percent solution of glucose is :

A. Isotonic

B. Hypotonic

C. Hypertonic

D. None of these

Answer:



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489. Which of the following is not a true organelle ?

A. Lysosome

B. Chloroplast

C. Ribosome

D. Mitochondrion

Answer:



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490. Detoxification of lipid soluble drugs and other harmful compounds in endoplasmic reticulum is carried out by :

A. Cytochrome P 450

B. Cytochrome bf

C. Cytochrome C

D. Cytochrome $a_1 - a_2$

Answer:



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491. Consider the following statements and select the correct option :

A. The endomembranes system includes plasma membrane, ER, Golgi complex,

Lysosomes and vacuoles

B. ER helps in transportation of substances, synthesis of proteins, lipoproteins and glycogen

C. Ribosomes are involved in protein synthesis

,br>D. Mitochondria help in oxidative phosphorylation and generation of ATP

A. B, C and D are correct

B. A- alone is correct

C. B-alone is correct

D. C-alone is correct

Answer: D-alone is correct



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492. The process by which water is absorbed by solids like colloids causing them to increase in volume is called:

- A. Osmosis
- B. Plasmolysis
- C. Imbibition
- D. Diffusion

Answer: Facilitated diffusion



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493. Zone of exclusion surrounds:

A. Golgi apparatus

B. Centrioles

C. Nucleus

D. Lysosomes

Answer:



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494. Histone octamer contains :

- A. Eight types of histones
- B. Eight histones of four different types
- C. Five types of histones
- D. Six types of histones

Answer:



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495. Glycocalyx is associated with :

A. Nucleolus

B. Plasma membrane

C. Nucleus

D. Nucleosome

Answer:



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496. When a cell is plasmolysed, it becomes,

- A. Flaccid and its TP becomes 0
- B. Turgid and TP becomes 0
- C. Turgid and TP becomes equal to OP
- D. Flaccid and DPD becomes 0

Answer:



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497. Ribosomal RNA is Activey synthesized in :

A. Lysosome

B. Nucleolus

C. Nucleoplasm

D. Ribosome

Answer:



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498. The correct sequence of cell organelles during photorespiration is :

- A. Chloroplast, Golgi bodies, Mitochondria
- B. Chloroplast, RER, dictyosomes
- C. Chloroplast, peroxisome, mitochondria
- D. Chloroplast, vacuole, peroxisome

Answer:



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499. Which of the following is the wrong statement?

A. Anamaena and Nostoc are capable of fixing nitrogen in free-living state also

B. Root nodule forming nitrogen fixers live as aerobes under free-living condition

C. Phosphorus is a constituent of cell membranes, Certain nucleis acids and all protein

D. Nitrosomonas and Nitrobacter are chemoautotrophs

Answer:



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500. What is true about ribosomes?

A. The prokaryotic ribosomes are 80S whereas "S" stands for sedimentation coefficient

B. These are composed of ribonucleic acid
and proteins

C. These are found only in eukaryotic cells

D. These are self-splicing introns of some
RNAs

Answer:



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501. Nuclear membrane is absent in :

A. Penicillium

B. Agaricus

C. Volvox

D. Nostoc

Answer:



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502. Select the correct statement:

A. Na^+ and K^+ ions move across cell membrane by passive transport

B. Proteins make upto 6-70 of the cell membrane

C. Lipids are arranged in a bilayer with polar heads towards inner side

D. Fluid mosaic model of cell membrane was proposed by singer and Nicolson

Answer:



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503. $Na^+ K^+$ pump is associated with:

- A. Passive transport
- B. Active transport
- C. Osmosis
- D. Imbibition

Answer:



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504. The microscope usually used for seeing living cells or tissues is:

- A. Compound microscope
- B. Electron microscope
- C. Phase contrast microscope
- D. Light microscope

Answer:



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505. Which of the following is present both in prokaryotic and eukaryotic cells?

A. Mitochondria

B. Endoplasmic reticulum

C. Ribosomes

D. Nucleus

Answer:



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506. Extranuclear DNA in the cytoplasmic is found inside:

A. Golgi bodies

B. Lysosomes

C. Vacuoles

D. Mitochondria

Answer:



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507. Proteins required for functioning of nucleus are formed in :

A. Nucleolus

B. RER

C. Cytoplasm

D. Mitochondrion

Answer:



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508. Which cell organelle is called suicidal bag?

A. Lysosome

B. Mitochondria

C. Peroxisome

D. Glycocalyx

Answer:



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509. Lysosomes have acidic environment inside their vesicles due to :

- A. Production of carboxylate ions inside it
- B. Production of phosphate ions inside it
- C. High pH compared to outside
- D. None of the above

Answer:



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510. Polytene chromosomes were discovered in

A. Chironomus

B. Drosophila

C. Neurospora

D. Rattus

Answer:



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511. Which of the following is the site of translation of the mRNA ?

A. Nucleus

B. Nucleolus

C. Golgi body

D. Ribosomes

Answer:



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512. The plane of cell wall formation in a dividing cell is determined by:

A. Golgi apparatus

B. Microfilaments

C. Microtubules

D. Endoplasmic reticulum

Answer:



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513. From the following statements, select the statement that is true:

A. All cells have wall

B. Animals cells contain microtubules but
plant cells do not

C. Golgi apparatus is found only in animal
cells

D. Chloroplasts are found in plant cells but
not in prokaryotic or animal cells

Answer:



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514. The cell membranes of the tadpole adjacent cells are fused at this cell junction:

- A. Macula adherens
- B. Zonula adherens
- C. Zonula occludens
- D.

Answer: Nexus



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515. The usual axonamal arrangement of microtubules is:

A. 6 pairs of doubles radially arranged at periphery with a pair of centrally located microtubules

B. 6 pairs of doublets radially arranged at periphery with a single centrally located microtubules

C. 9 pairs of doublets radially arranged at periphery with a pair of centrally located microtubules

D. 9 pairs of doublets radially arranged at periphery with a single centrally arranged microtubule

Answer:



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516. When the chromosomes has a centromere near to one end of chromosome resulting one shorter one longer arm.

- A. Metacentric
- B. Submetacentric
- C. Acrocentric
- D. Telocentric

Answer:



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517. The shape of cocci bacteria is :

- A. Rod -shaped
- B. Spherical
- C. Comma-shaped
- D. Spiral

Answer:



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518. Which of the following is seen only in prokaryotic cells?

A. Dictyosomes

B. Ribosomes

C. Mesosomes

D. Endoplasmic reticulum

Answer:



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519. The cytoplasm of neighbouring cells is connected with the help of :

- A. Middle lamella
- B. Primary wall
- C. Mitochondria
- D. Endomembrane system

Answer:



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520. Choose the wrong statements regarding bacterial cell:

(A) Glycocalyx is the outermost envelope in bacteria

(B) The glycocalyx may be a loose sheath called capsule

(C) The glycocalyx may be thick and tough called slime

(D) A special structure formed by the plasma membrane is called mesosomes

(E) Small bristle-like fibrils sprouting out of the cell are called fimbriae

A. A and C are wrong

B. A and E are wrong

C. B and C are wrong

D. A and D are wrong

Answer:



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521. Consider the following statements :

(A) In prokaryotic cell, a special membranous structure formed by extension of the plasma

membrane into the cell is known as polysome

(B) The smooth endoplasmic reticulum is the major site for synthesis of glycoproteins

(C) Rubisco is the most abundant protein in the whole of the biosphere

(D) Mitochondria , chloroplasts and peroxisomes are not considered as part of endomembrane system of the above statements :

A. C and D alone are correct

B. A and B alone are Correct

C. B and C alone are correct

D. A and D alone are correct

Answer: B and D alone are correct



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522. Consider the following statements with reference to facilitated transport:

- (A) Requires ATP energy
- (B) Transport saturates
- (C) Highly selective

(D) Requires special membrane proteins of the above statements :

A. A, B and C are relevant but D and E are irrelevant

B. B, C and E are relevant but D are irrelevant

C. C, D and E are relevant but A and B are irrelevant

D. A, D and E are relevant but B and C are irrelevant

Answer: B,C and D are relevant but A and E are irrelevant



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523. Pigment-containing membraneous extensions in some cyanobacteris are:

- A. Heterocysts
- B. Basal bodies
- C. Pneumatophores
- D. Chromatophores

Answer:



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524. The Golgi complex plays a major role:

- A. In trapping the light and transforming it into chemical energy
- B. In digesting proteins and carbohydrates
- C. As energy transferring organalle

D. In post-translational modification of proteins and glycosidation of lipids

Answer:



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525. The fluid mosaic model of cell membrane was given by:

A. S.S singer and G.L. Nicolson

B. S.J. Singer and H.L. Nicolson

C. S.J. Singer and G.L Nicolson

D. S. S. Singer and H.L Nicolson

Answer:



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526. The movement of cilia and flagella is due to presence of:

A. Radial spokes

B. central sheath

C. Singlet microtubules

D. Dyneins

Answer:



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527. The motile bacteria are able to move by:

A. Cilia

B. Pili

C. Fimbrae

D. Flagella

Answer:



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528. Fructose is absorbed into blood through mucosal cells of intestine by the process called:

A. Simple diffusion

B. Co-transport mechanism

C. Active transport

D. Faciliated transport

Answer:



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529. The osmotic expansion of cell kept in water is chiefly regulated by:

A. Plastid

B. Ribosomes

C. Mitochondria

D. Vacuoles

Answer:



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530. The solid linear cytoskeletal elements having a diameter of 6 nm and made up of a single type of monomer are known as

A. Intermediate filaments

B. Lamins

C. Microtubules

D. Microfilaments

Answer:



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531. The structures that are formed the function of mitochondria in bacteria?

A. Cell wall

B. Mesosomes

C. Nucleoid

D. Ribosomes

Answer:



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532. The structure that are formed by stacking of organized flattened membranous sacs in the chloroplasts are :

A. Cristae

B. Grana

C. Stromal lamellae

D. Stroma

Answer:



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533. Select the correct matching in the following pairs:

A. Smooth ER=oxidation of phospholipids

B. Smooth ER= Synthesis of lipids

C. Rough ER-synthesis of glycogen

D. Rough ER= oxidation of fatty acids

Answer:



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534. True nucleus is absent in:

A. Anabaena

B. Mucor

C. Vaucheria

D. Volvox

Answer:



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535. Which of the following is not an inclusion body found in prokaryotes?

A. Phosphate granule

B. Cyanophycean granule

C. Glycogen granule

D. Polysome

Answer:



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536. DNA is not present in:

A. Chloroplast

B. Ribosomes

C. Nucleus

D. Mitochondria

Answer:



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537. Nuclear envelope is a derivative of:

A. SER

B. Membrane of Golgi Complex

C. Microtubules

D. RER

Answer:



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538. Balbiani rings are sites of:

- A. Lipid synthesis
- B. Nucleotide synthesis
- C. Polysacharrides synthesis
- D. RNA Synthesis

Answer:



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539. In angiosperms, microsporogenesis and megasporogenesis:

- A. Occur in anther
- B. Form gametes without further division
- C. Involve meiosis
- D. Occur in ovule

Answer:



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540. Which of the following are not membrane bound?

- A. Vacuole
- B. Ribosome
- C. Lysosome
- D. Mesosomes

Answer:



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541. The function of the gap junction is to :

A. Performing cementing to keep

neighbouring cells together

B. Facilitate communication between

adjoining cell by connecting the

cytoplasm for rapid movement of ions,
small and some large molecules.

C. Separate two cells from each other

D. Stop leaking of substance across a tissue

Answer:



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542. The structure that help some bacteria to
attach to rocks and/or host tissues are:

A. Rhizoids

B. Fimbriae

C. Mesosomes

D. Hold fast

Answer:



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543. In photosynthesis that light independent reaction take place at :

A. Thylakoid lumen

B. Photosystem-I

C. Photosystem-II

D. Stromal matrix

Answer:



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544. Cellular organelles with membrane are:

A. Nuclei, ribosomes and mitochondria

B. Chromosomes, ribosomes and ER

C. ER, ribosomes and nuclei

D. Lysosomes, Golgi apparatus and mitochondria

Answer:



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545. Which of the below mention properties is not true with respect to facilitate transport ?

A. Requires special membrane protein

B. Transport saturates

C. Uphill transport

D. Highly selective

Answer:



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546. Which of the below mention structures does not form a part of the endomembrane system?

A. Golgi complex

B. ER

C. Mitochondria

D. Vacuole

Answer:



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547. Chloroplast in higher plants are _____ shaped:

A. Kidney

B. Lens

C. Bean

D. Dome

Answer:



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548.

They help in cell wall formation

(iii) They help in DNA replication

(iv) They increase surface area of plasma membrane

Which of the following prokaryotic structures has all the above roles ?

A. Chromosomes

B. Ribosomes

C. Mesosomes

D. Lysosome

Answer:



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549. Which of the following cell organelles stores hydrolytic enzymes ?

A. Mesosome

B. Lysosome

C. Microsome

D. Ribosome

Answer:



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550. Which of the following rRNAs acts as structural RNA as well as ribozyme in bacteria ?

A. 5.8s r-RNA

B. 5S r-RNA

C. 18S r-RNA

D. 23S -rRNA

Answer:



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551. Mitochondria and chloroplast are:

1. Semi-autonomous organelles
2. Formed by division of pre-existing organelles as they contain DNA but lack protein-synthesizing machinery

- A. Both (1) and (2) are false
- B. Both (1) and (2) are correct
- C. (2) is true but (1) is false
- D. (1) is true but (2) is false

Answer:



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552. Water soluble pigment found in plant cell vacuoles are:

A. Anthocyanins

B. Xanthophylls

C. Chlorophylls

D. Carotenoids

Answer:



553. Which of the following is not a feature of the plasmids?

- A. Single stranded
- B. Independent replication
- C. Circular structure
- D. Transferable

Answer:



554. A complex of ribosomes attached to single strand of RNA is known as :

A. Okazaki fragment

B. Polysome

C. Polymer

D. Polypeptide

Answer:



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555. Microtubules are the constituents of

- A. Centrosome, nucleosome and centrioles
- B. Cilia, flagella and chromatin
- C. Spindle fibres, centrioles and cilia
- D. Centrioles, spindle fibres and chromatin

Answer:



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556. Which one of the following cell organelles is enclosed by a single membrane?

A. Nuclei

B. Mitochondria

C. Chloroplast

D. Lysosome

Answer:



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557. Fill in the blanks: Biomembrane consists of phospholipids which has one unit of _____ and two units _____ and phosphate group



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558. Fill in the blanks: Most of food stored in the higher plants is in the form of _____ but their cell wall of _____.



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559. Write the function of the following: (a)

Microtubules



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560. Write the function of the following: (b)

Sphaerosome



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561. Write the function of the following: (C)

Endodermis



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562. Write the function of the following:

Companion cells



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563. Write the function of the following:

Lenticels



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564. How many base pairs are present in a typical nucleosome?



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565. Fill in the blanks:

Golgi body, associated to RER, if separated away, will not form.....



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566. How do the following help in transfer, storage and expression of genetic informations?

(a) centriole



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567. How do the following help in transfer, storage and expression of genetic informations?

(b) Centromere



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568. How do the following help in transfer, storage and expression of genetic informations?

(d) Ribosomes



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569. How do the following help in transfer, storage and expression of genetic informations?

(e) Chromatin



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570. In mitochondria, protons accumulate in the :

A. Intermembrane space

B. matrix

C. Outer membrane

D. Inner membrane

Answer:



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571. Which of the following is not consider as a part of the endomembrane:

A. Vacuole

B. Lysosome

C. Golgi complex

D. Peroxisome

Answer:



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572. Which of the following cellular parts is correctly described?

- A. Thylakoids-flattened membranous sacs forming grana of chloroplasts
- B. Centrioles-sites for active RNA synthesis
- C. Ribosomes-those of chloroplasts are large (80S) while those of the cytoplasm are smaller (70S)
- D. Lysosome-optimally active at a pH of about 8.5

Answer:



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573. Match the items in Column-I with Column-II and choose the correct answer:

##MDN_BBA_BIO_XIP1U03C08S07₀₂₂ – Q01##

A. A = 5, B = 3, C = 1, D = 2, E = 4

B. A = 2, B = 3, C = 4, D = 5, E = 1

C. A = 5, B = 2, C = 3, D = 1, E = 4

D. A = 5, B = 3, C = 2, D = 4, E = 1

Answer: A = 4 B = 1, C = 3, D = 5, E = 2



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574. Match the following with correct combinations:

##MDN_BBA_BIO_XIP1U03_C08S07₀₂₃ – Q01##

A. $A = 5, B = 3, C = 1, D = 4, E = 2$

B. $A = 5, B = 3, C = 2, D = 4, E = 1$

C. $A = 2, B = 3, C = 1, D = 4, E = 5$

D. $A = 3, B = 4, C = 1, D = 5, E = 2$

Answer: $A = 3, B = 5, C = 1, D = 4, E = 2$



575. These questions consist of two statements each, printed as Assertion and Reason. While answering these questions you are required to choose any one of the following four responses.

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

If both assertion and Reason are true but reason is not correct explanation of Assertion.

If Assertion is true but Reason is false.

If both Assertion and Reason are false.

Assertion: In a tadpole, if thyroid is cut, metamorphosis stops.

Reason: TSH is not secreted.

A. A

B. B

C. C

D. D

Answer:



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576. These questions consist of two statements each, printed as Assertion and Reason. While answering these questions, you are required to choose any one of the following four responses. A. If both Assertion and Reason are true and Reason is a correct explanation of the Assertion. B. If both Assertion and Reason are true but Reason is not a correct explanation of the Assertion. C. If Assertion is true but Reason is false. D. If both Assertion and Reason are false.

Assertion: Vascular cambium is considered as lateral. Reason. It gives rise to lateral shoots.

A. A

B. B

C. C

D. D

Answer:



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577. These questions consist of two statements each, printed as Assertion and Reason. While answering these questions, you are required to choose any one of the following four responses. A. If both Assertion and Reason are true and Reason is a correct explanation of the Assertion. B. If both Assertion and Reason are true but Reason is not a correct explanation of the Assertion. C. If Assertion is true but Reason is false. D. If both Assertion and Reason are false.

Assertion: Vascular cambium is considered as lateral. Reason. It gives rise to lateral shoots.

A. A

B. B

C. C

D. D

Answer:



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578. These questions consist of two statements each, printed as Assertion and Reason. While answering these questions you are required to choose any one of the following four responses.

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

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

If Assertion is true but Reason is false.

If both Assertion and Reason are false.

Assertion: In a tadpole, thyroid is

cut,metamorphosis stops.

Reason:TSH is not secreted.

A. A

B. B

C. C

D. D

Answer:



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579. The main organelle involved in modification and routing of newly synthesized proteins to their destination is:

- A. Mitochondria
- B. Endoplasmic reticulum
- C. Lysosome
- D. Chloroplast

Answer:



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580. Chlorophyll in chloroplast is located in :

A. Grana

B. Stroma

C. Both grana and stroma

D. pyrenoid

Answer: Pyrenoid



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581. According to fluid mosaic model, cell membrane are semi-fluid, where lipids and integral proteins can diffuse randomly, IN recent year, this model has been modified. In this regard, which of the following statements is incorrect ?

A. Proteins can travel within the lipid bilayer

B. Proteins can also undergo flip-flop movements in lipid bilayer

C. Many proteins remain completely embedded within lipid bilayer

D. Proteins can remain confined within certain domains of membrane

Answer:



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582. Centromere is required for :

A. transcription

B. Crossing over

C. Cytoplasmic cleavage

D. Movement of chromosomes towards poles

Answer:



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583. Which of the following is the simplest amino acid?

A. Alanine

B. Asparagine

C. Glycine

D. Tyrosine

Answer:



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584. Chemiosmotic theory of ATP synthesis in the chloroplasts and mitochondrial is based on

A. Membrane potential

B. Accumulation of Na^+ -ions

C. Accumulation of K^+ -ions

D. Protein gradient

Answer:



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585. Many cells function properly and divide mitotically even though they do not have:

A. Plasma membrane

B. Cytoskeleton

C. Mitochondria

D. Plastids

Answer:



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586. In which of the following would you expect to find glyoxysomes?

A. Endopalsm of wheat

B. Storage

C. Secretion

D. breakdown of fats

Answer:



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587. Which of the following is not a feature of prokaryote?

- A. Absence of nuclear membrane
- B. DNA is associated with histones
- C. Absence of mitochondrion
- D. Both (b) and (c)

Answer:



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588. Cell theory was given :

A. Robert Hooke

B. Robert Brown

C. Schleiden and Schwann

D. Messelson and Stahl

Answer:



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589. Phagosomes and pinosomes collectively referred to as:

A. Lysosomes

B. Glyoxysomes

C. Sphaerosomes

D. Endosomes

Answer:



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590. The crystals of calcium carbonate, which appear like a bunch of grapes in epidermal cells of the leaves of some plants are called.

A. Sphaerosides

B. Raphides

C. Otoliths

D. Cystoliths

Answer:



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591. If a plant cell is placed in a solution less concentrated than that of cell sap, water from

outside will enter in to the protoplasm through the process of:

A. Endosmosis

B. Diffusion

C. Imbibition

D. Plasmolysis

Answer:



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592. Ribosomes:

A. Consists of a large and two small subunits

B. Contains identical componets in prokaryote and eukaryote

C. Is the site of RNA replication

D. HAs two or three sites for t-RNAs

Answer:



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593. Racker's particles occurs in :

A. Chromosomes

B. Nucleus

C. Golgi complex

D. Mitochondria

Answer:



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594. The core metal of chlorophyll is :

A. Fe

B. Cu

C. Ni

D. Mg

Answer:



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595. Single membrane bound organelles areand

A. Lysosome

B. Nucleus

C. Microsome

D. Chloroplast

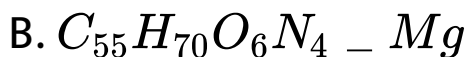
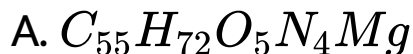
Answer:



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596. Write the chemical formula of chlorophyll

a.



Answer:



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597. Cell membrane is :

- A. Semipermeable
- B. Permeable
- C. Selectively permeable
- D. Impermeable

Answer:



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598. Which of the following is characteristic of phospholipids of plasma membrane?

- A. One non-polar head and two polar tails
- B. One polar head two non-polar tails
- C. Two non-polar heads and one polar tail
- D. Two polar head and one non-polar tail

Answer: Two polar heads and two polar tails



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599. The organelle associated with aerobic respiration is :

A. Nucleus

B. Centriole

C. Chloroplast

D. Mitochondria

Answer:



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600. Plasma membrane helps in :

A. Osmoregulation

B. Protein synthesis

C. Nucleic acid synthesis

D. Transportation of only water in and out
of cell

Answer:



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601. Which of the following organelles does not have membrane ?

A. Ribosomes

B. Nucleus

C. Chloroplast

D. Mitochondria

Answer:



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602. Centrioles take part in formation of:

A. Cell plate

B. Spindle

C. Nucleolus

D. Start of cell division

Answer:



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603. Phytol chain is present in :

- A. Carotenoids
- B. Chlorophyll
- C. Haemoglobin
- D. Phycocyanin

Answer:



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604. Amyloplasts are particles storing:

- A. Starch
- B. Proteins
- C. Fats
- D. All of these

Answer:



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605. The chief component of middle lamella in plant cell is :

A. CA

B. K

C. Cu

D. Zn

Answer:



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606. Who proposed the cell theory ?



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607. Name the smallest sized cell and largest sized plant cell.



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608. What a facilitated diffusion?



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609. What is the main difference between cell organelles and cell inclusions ?



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610. Enlist two functions of a plant vacuole.



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611. Write peculiar features of nucleoid of a bacterial cell.



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612. What is the main difference between cell organelles and cell inclusions ?



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613. Enlist the functions of endoplasmic reticulum.



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614. Why are lysosomes called 'suicidal bags' ?



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615. Differentiate leucoplasts and chromoplasts.



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616. Who proposed fluid mosaic model of plasma membrane?





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617. Draw a neat and labelled diagram of a sarcomere.



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618. Describe the structure and functions of eye.



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619. Draw a labelled diagram of mitochondrion. Write its function.



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620. Give three difference between 70S and 80S ribosomes.



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621. Draw a neat and labelled diagram of a sarcomere.



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622. Name the structure and functional elements of chloroplasts.



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