



BIOLOGY

BOOKS - MODERN PUBLISHERS

BIOLOGY (HINGLISH)

CELL : THE UNIT OF LIFE

Practice Problem

1. Who coined the word cell?



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2. Which scientist called the protoplasm as the physical basis of life?



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3. What was the most generalisation of cell biology 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 word cytoplasm and nucleoplasm?



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8. Name the structure 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 cell?



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20. Define plasma membrane



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21. What are mesosomes?



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



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23. Define polysome



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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 chemical 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 a selectively permeable membrane



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



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36. Why is plasma membrane called a dynamic 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 does facilitated diffusion differ from simple 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. Give one major difference between pinocytosis and phagocytosis.



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45. Define exocytosis.



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46. Give the occurrence of cell wall.



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



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48. What is cell membrane?



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49. What is middle lamella?



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50. Define cell theory



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51. Name two 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.



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54. What is ER?



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55. Give one major function of SER.



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56. Give one major function of RER.



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57. What are the subunit of ribosome?



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



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59. Define polysome.



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



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61. Who discovered Golgi body?



[Watch Video Solution](#)

62. What are dictyosomes?



[Watch Video Solution](#)

63. Name two types of ER



[Watch Video Solution](#)

64. List two major functions of Golgi body.



[Watch Video Solution](#)

65. What is RER ?Write one function of RER



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66. Which cell organelle is called protein factory?



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67. Give one function of SER



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68. What is residual body?



Watch Video Solution

69. Why are the lysosomes called acidic hydrolases?



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70. What is autolysis?



Watch Video Solution

71. Who discovered the mitochondria?



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72. Who coined the term mitochondrion?



[Watch Video Solution](#)

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



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74. What are cristae? Give their function.



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75. Define oxysomes.



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76. What are mitoribosomes?



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77. Why are the oxysomes called ATP particles?



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78. Why are the mitochondria and plastids called semiautonomous organelles?



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79. Why are the mitochondria called power houses of the cell?



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80. Give one major difference between leucoplasts and chromoplasts.



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



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82. What are plastidoribosomes?



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83. Name the structural and functional elements of chloroplasts.



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





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85. What is a granum?



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86. What is thylakoid?



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87. Which cell organelle is called cell centre?





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88. What is the arrangement of microtubules in centriole and basal body?



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89. Give the chemical nature of the microtubules.



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90. Give the main function of centrioles.



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91. What do you mean by diplosome?



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92. Which structure is called ciliated centriole?



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93. What are microfilaments?



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



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



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96. What is synchronous beating of cilia?



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97. What is metachronous beating of cilia?



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98. List two functions of microtubules.



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



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100. Which structures help in cytokinesis of cytoplasm and cleavage of cell?



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101. What are cell inclusions?



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102. Give two functions of cell sap.



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103. What is the function of contractile vacuole?



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104. Name the most commonly found stored food of plants and animals.



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105. Which type of cell lacks membrane-bound organelles?



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106. Who discovered nucleus?



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107. Why is nucleus called director of the cell?



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



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109. What is tonoplast?



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110. What is cell membrane ?



Watch Video Solution

111. What is nuclear-pore complex?



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



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113. Give two functions of nuclear membrane.



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114. List two functions of nucleoplasm.



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



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



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117. List two functions of nucleolus.



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118. Who coined the term chromosome?



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119. Give one major difference between heterochromatin and euchromatin.



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120. What are SAT - chromosomes?



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121. Define nucleosome.



Watch Video Solution

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



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Ncert File Ncert Exercise Questions

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: A



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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: C



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3. Match the following :



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4. Which of the following is correct?

- A. Cells of all living organisms have a nucleus
- B. Both animal and plant cells have a well defined cell wall
- C. In prokaryotes, there are no membrane-bound organelles
- D. Cells are formed de novo from abiotic materials

Answer: C



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5. What is mesosome in a prokaryotic cell?

Mention the functions that it performs.



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6. 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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7. 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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8. What are the characteristics of prokaryotic cells?



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9. Multicellular organisms have division of labour. Explain.



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



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11. What are nuclear pores? State their function.



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



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13. Describe the structure of the following with the help of labelled diagrams. (i) Nucleus
(ii) Centrosome



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14. 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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Ncert File Ncert Exemplar Problem A Multiple Choice Questions

1. 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: A



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2. 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: D



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3. Which one of these is not a eukaryote

A. Euglena

B. Anabaena

C. Spirogyra

D. Agaricus

Answer: B



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4. Which of the following dyes is best suited for staining chromosomes

A. Basic Fuchsin

B. Safranin

C. Methylene blue

D. Carmine

Answer: D



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5. Different cells have different sizes. Arrange the following cells in an ascending order of their size. Choose the correct option among the followings

i. Mycoplasma, ii. Ostrich eggs

iii. Human RBC, iv. Bacteria

A. i, iv, iii & ii

B. i, ii, iii & iv

C. ii, i, iii & iv

D. iii, ii, i & iv

Answer: A



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6. 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: B



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7. Who proposed the fluid mosaic model of plasma membrane ?

A. Camillo Golgi

B. Schleiden and Schwann

C. Singer and Nicolson

D. Robert Brown

Answer: C



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8. 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: B



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9. 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: C



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10. 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: A



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11. 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: D



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12. 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: C



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13. 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: A



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14. The stain used to visualise mitochondria is

A. Fast green

B. Safranin

C. Acetocarmine

D. Janus green

Answer: D



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Ncert File Ncert Exemplar Problem B Very Short Answer Questions

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



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2. What does 'S' refer in a 70S and 80S ribosome?



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



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4. What are gas vacuoles ? State their functions.



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5. What is the function of a polysome? (Gk. Poly = many, Soma= body).



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6. What is the feature of a metacentric chromosome?



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7. What is referred to as satellite chromosome?



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



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2. Explain the association of carbohydrate to the plasma membrane and its significance.



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3. Comment on the cartwheel structure of centriole.



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4. Briefly describe the cell theory.



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

Reticulum (SER).



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



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



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8. What are histones? What are their functions?



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[Ncert File Ncert Exemplar Problem C Long Answer Questions](#)

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



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

(a) Rudolf Virchow

(b) Schleiden and Schwann



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



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



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5. Eukaryotic cells have organelles which may

(a) not be bound by a membrane

(b) bound by a single membrane

(c) bound by a double membrane



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6. The genomic content of the nucleus is constant for a given species where as the extrachromosomal DNA is found to be variable among the members of a population. Explain.





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7. Justify the statement, 'Mitochondria are power houses of the cell'.



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



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9. Write the functions of the following

(a) Centromere (b) Cell wall

(c) Smooth ER (d) Golgi apparatus

(e) Centrioles



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





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Higher Order Thinking Skills Brain Twisting Very Short Answer Questions

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



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2. Why are the phospholipids called amphipathic molecules?

 [View Text Solution](#)

3. Enlist two peculiar characters of prokaryotic cell.

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4. What is chemical nature of ribosomes?

 [View Text Solution](#)

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



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6. What do you mean by "omne cellula e cellula".



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7. Give the relationship between cell size and surface area/volume ratio.



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8. State one difference between cell wall of bacterium and a plant cell.



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9. Define facilitated diffusion.



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10. Name two semiautonomous cell-organelles.



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11. Which cellular structures form the cytoskeleton?



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12. Give microtubular arrangement of centriole and cilium.



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13. Give the function of peroxisomes.



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14. Why is nucleus called director of the cell ?



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



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16. State one difference between cystoliths and raphides.



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Higher Order Thinking Skills Brain Twisting Short Answer Questions

1. Differentiate between gram positive and gram negative bacteria.



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2. Enlist four peculiar features of fluid-mosaic model of plasma membrane.



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3. Give significance of osmosis.



[View Text Solution](#)

4. Differentiate pinocytosis and phagocytosis.



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



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6. Enlist two main differences between SER and RER.



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7. What is peculiar about mitochondrial DNA?



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8. What is nucleosome? Give its chemical nature.



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9. Differentiate between microtubules and microfilaments.



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10. Enlist two similarities between a mitochondrion and a bacterium.



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11. Enlist the main postulates of cell theory.

Who proposed the cell theory?



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12. Tabulate six differences between a prokaryotic cell and a eukaryotic cell.



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13. Enlist the functions of endoplasmic reticulum.



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Higher Order Thinking Skills Brain Twisting Long Answer Questions

1. Give an account of prokaryotic cell.



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2. In fluid mosaic model of plasma membrane ,



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3. Give the structure and function of nucleus.



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Quick Memory Test A Say True Of False

1. Centriole has 9 + 2 microtubular arrangement while cilium has 9 + 0 microtubular arrangement.



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2. Transcriptionally inactive chromatin is called heterochromatin.



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3. "Cell within the Cell" is stated for mitochondria and chloroplasts.



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4. Lipid storing plastids are aleuroplasts, while protein storing plastids are elaioplasts.



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5. ETS enzymes are located on inner mitochondrial membrane, while enzymes of Krebs's cycle are located in the mitochondrial matrix.



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6. The prokaryotes have both 70s and 80S ribosomes.



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



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



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9. Solid particles are ingested by pinocytosis.





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10. Membranes are useful for compartmentalisation of cells.



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11. Phospholipid molecule is an amphipathic molecule.



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12. Diffusion is a passive process while facilitated diffusion is an active process.



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



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14. Structural and functional units of chloroplasts are grana.



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15. Ribosomes are also called Palade particles.



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Quick Memory Test B Complete The Missing Links

1. are the stacks of closely packed thylakoids.



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2. type ribosomes are found in the prokaryotes, while type ribosomes are found in eukaryotes.



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3. surrounds the central vacuole.



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4. Non-living structures of the cytoplasm are called



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



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6. Starch storing plastids are called



[Watch Video Solution](#)

7. Extensive infoldings of mitochondrial membrane are



[Watch Video Solution](#)

8. Transcriptionally active chromatin is called

.....



Watch Video Solution

9. Chemically, the ribosomes are formed

of.....



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



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11. microtubular arrangement is found in the cilium, while microtubular arrangement is found in the centriole.



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12. Power houses of the cell are.....



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13. The acrosome of the sperm is formed from

.....



Watch Video Solution

14. Single membrane bound organelles are

and



[Watch Video Solution](#)

15. Structural and functional units of chloroplasts are



[Watch Video Solution](#)

16. Naked and circular DNA molecules are found in And



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17. Hydrolytic enzymes are located in



[Watch Video Solution](#)

18. An organelle without a limiting membrane

.....



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19. are called suicidal bags of the cell.



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20. Smallest sized prokaryote is



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21. Passive transport includes and



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

.....



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23. Shrinking of a plant cell in a hypertonic solution is called



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24. is an amphipathic molecule.



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25. Exchange of gases at lung alveoli occurs by While intaking of glucose by a cell occurs by



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Quick Memory Test C Choose The Correct Alternative

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



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2. Nucleoid is found in prokaryotic cells/eukaryotic cells.



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3. Ingrowths of plasma membrane of a bacterium are called polysome/mesosomes.



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



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



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6. When a flaccid cell is placed in a hypotonic solution, it becomes plasmolysed/deplasmolysed.



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



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



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9. Enzymes of Krebs's cycle are found in outer chamber/inner chamber/inner membrane of mitochondrion.



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10. Light-independent reactions of photosynthesis occur in thylakoids/stroma of chloroplast.



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11. 9 + 2 microtubular arrangement is found in Basal body/ flagellum.



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12. Gas vacuoles/contractile vacuoles help in osmoregulation.



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



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14. A chromosome with a centromere near its centre is called Acrocentric/metacentric/submetacentric chromosome.



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Revision Exercise Very Short Answer Questions

1. What does "Theory of Lineage" state? Give its significance.



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2. Name the three basic components of cell.



[View Text Solution](#)

3. Define eutly.



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4. State one major difference between prokaryotic cell and eukaryotic cell.



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5. Why the plasma membrane of a bacterium is called respiratory membrane?



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6. What are mesosomes? State their function.



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7. Define a nucleoid.



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8. Give the term for the extra-nuclear rings of DNA present in the cytoplasm of Escherichia coli.



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



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10. What are sex pili? Give their function.



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11. The main difference between Gram positive and Gram negative bacteria is





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12. What is the chemical nature of plasma membrane of a eukaryotic cell?



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13. Why are the phospholipid molecules called amphipathic molecules?



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14. What does fluid-mosaic model of plasma membrane state?



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15. Why is the plasma membrane called a selectively permeable membrane



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16. State one major difference between passive transport and active transport.



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17. Define osmosis



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18. State one major difference between pinocytosis and phagocytosis.



[View Text Solution](#)

19. State one major difference between primary cell wall and secondary cell wall.



View Text Solution

20. What is chemical nature of middle lamella?



View Text Solution

21. Define cyclosis.



View Text Solution

22. Name three elements of ER.



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



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



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25. Give the significance of glycocalyx.



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26. Name four forms of Lysosomes.



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27. Name two semi-autonomous organelles.



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28. Name two types of chromatin.



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



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



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31. Which structure is called little nucleus?



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32. Name two types of giant chromosomes.



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33. Which organelle shows polymorphism?



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34. Give the chemical nature of ribosomes.



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35. What is polyribosome?



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36. What are cytoskeletal structures?



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37. Who proposed the "Cell theory"



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



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39. State one major difference between cell organelles and cell inclusions.



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40. Name the three components of Golgi body.



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41. Define sarcoplasmic reticulum.



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42. What is glycosylation?



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43. Recall that 0.9% NaCl and 5% glucose solutions are isotonic to human erythrocytes. Indicate whether each of the following solutions is hypertonic, hypotonic or isotonic. Suggest what type of changes will occur in erythrocytes when placed in :

(a) 5% NaCl (b) 5% Glucose (c) 0.8% NaCl (d) 0.2% Glucose (e) 10% Glucose (t) 0.2% NaCl.



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44. When a 5% glucose solution and an 8% glucose solution are separated by semi-permeable membrane, explain"

(i) Which solution has greater osmotic pressure?

(ii) In which direction osmosis occurs?

(iii) Which solution will increase in volume?



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45. State one major difference between SER and RER

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46. Name the cell organelles which are enclosed by multiple of unit membrane.

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47. What is dictyosome ?



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48. Why are the lysosomes called suicidal bags?



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49. Why are the lysosomal enzymes called acid hydrolases?



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50. Give the location of oxysomes.



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51. Why are the mitochondria called semiautonomous organelles?



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52. Name three types of leucoplasts.



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53. Name the structural and functional elements of chloroplasts.



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54. What is the microtubular arrangement in the centrioles?



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55. State one major difference between centriole and basal body.



View Text Solution

56. State one major difference between centriole and flagellum.



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57. Define tonoplast.



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58. Give the nature of nuclear membrane.



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59. Classify the chromosomes on the basis of position of centromere.



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60. State one major difference between heterochromatin and euchromatin.



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61. What are nucleosomes?



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62. State one major difference between plant cell and animal cell.



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63. Expand the term NOR.



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Revision Exercise Short Answer Questions

1. Who proposed the cell theory? List its postulates.



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2. List two main differences between prokaryotic and eukaryotic cell.



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3. Differentiate types of bacteria on the basis of their shape.



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4. Discuss nucleoid in a bacterium.



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5. Give the significance of diffusion.



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6. Tabulate difference between diffusion and osmosis.



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7. What is active transport? Give one example of active transport



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



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9. Write two differences between plant cell and animal cell.



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10. Why is ER called cell circulatory system?



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11. Give difference between 70 S and 80 S ribosomes.



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12. What are thylakoids? Why are these called structural and functional units of chloroplasts?



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13. Why is basal body called ciliated centriole?



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14. Differentiate leucoplasts and chromoplasts.



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15. Differentiate between primary cell wall and secondary cell wall.



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16. What is effect of hypotonic and hypertonic salt solution on the RBCs.





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



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18. Differentiate between cell organelles and cell inclusions.



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19. Differentiate between heterophagy and autophagy.



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20. List the functions of a vacuole.



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21. Differentiate between Euchromatin and heterochromatin.



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22. What are desmotubules? Give their function.



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



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24. Name the various modifications of plasma membrane and explain the desmosomes.



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25. Give three functions of nucleus.



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26. Why membranes are referred to as 'Proteins ice-bergs in a sea of lipids'? Explain this statement



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27. What is cell membrane?



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28. What is cell wall?



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29. Where would the following structures be found in a cell ?

(a) microtubules , (b) thylakoid , (c) $F_0 - F_1$ complex , (d) ribosomes , (e) nucleolus



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30. Distinguish between :

(i) extrinsic and intrinsic proteins (ii) primary

and secondary lysosomes.



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Revision Exercise Long Answer Questions

1. Give an account of structure and functions of cell wall.



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2. Write down the functions of Golgi bodies.



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Competition File Objective Type Questions A
Multiple Choice Questions Mcqs

1. A major breakthrough in the study 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: A



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2. Which of the following statements regarding mitochondrial membrane is not correct

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

forming a series of infoldings

D. Outer membrane resembles a sieve

Answer: B



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3. Which of the following statements regarding cilia is not correct

- A. The organised beating of cilia is controlled by fluxes of Cat across membrane
- B. Cilia are hair-like cellular appendages
- C. Microtubules of cilia are composed of tubulin
- D. Cilia contain an outer ring of nine doublet microtubules surrounding two single microtubules

Answer: C



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4. Vacuole is covered by a membrane called

- A. Tonoplast
- B. Jacket
- C. Cell membrane
- D. Tonoplasm

Answer: A



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5. Spindle fibres are made up of

A. Tubulin

B. Humulin

C. Intermediate filament

D. Flagellin

Answer: A



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6. What is common between chloroplasts, chromoplasts and leucoplasts

A. Presence of pigments

B. Possession of thylakoids and grana

C. Storage of starch, proteins and lipids

D. Ability to multiply by a fission-like process

Answer: D



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7. r-RNA is synthesized by:

A. Nucleus

B. Nucleolus

C. Cytoplasm

D. Endoplasmic reticulum

Answer: B



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8. The biomembrane tonoplast is:

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

Answer: D



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9. Cell drinking is :

A. Exocytosis

B. Pinocytosis

C. Phagocytosis

D. None of these

Answer: B



View Text Solution

10. Subcellular organelle is :

A. Peroxisome

B. Ribosome

C. Plastid

D. Lysosome

Answer: B



View Text Solution

11. Golgi body is associated with:

A. Packaging and storage of material

B. Cell plate formation

C. Secretion of different substances

D. All of the above

Answer: D



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12. Acrosome is formed from:

A. Golgi body

B. Ribosome

C. Lysosome

D. ER

Answer: A



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

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

Answer: A



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14. The cell wall of eukaryotic organism is made up of:

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

Answer: B



View Text Solution

15. The bacterial cell wall is made up of:

A. Cellulose

B. Hemicellulose

C. Cellulose and hemicellulose

D. Peptidoglycan

Answer: D



View Text Solution

16. Which of the following subunit of ribosome is ribosome is composed of 23S rRNA and a 5S rRNA +32 different proteins

" " Or

The largest subunit of prokaryotic ribosomes is

A. 50S

B. 70S

C. 30S

D. 60S

Answer: A



Watch Video Solution

17. 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: B



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18. Cell wall

A. Lignin, hemicellulose, protein and lipid

B. Hemicellulose, cellulose, tubulin and lignin

C. Lignin, hemicellulose, pectin and lipid

D. Lignin, hemicellulose, pectin and cellulose

Answer: D



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19. The term 'cytoplasm' and 'nucleoplasm' were given by

A. Purkinje

B. Strasburger

C. Brown

D. Flemming

Answer: A



Watch Video Solution

20. Cell wall of bacterium is formed of:

A. Cellulose

B. Hemicellulose.

C. Lignin

D. Peptidoglycan

Answer: D



Watch Video Solution

21. Which of these is mismatched?

A. Amyloplasts = Store protein granules

B. Elaioplasts = Store lipids

C. Chloroplasts = Contain chlorophyll
pigments

D. Leucoplasts = Contain colourless
pigments

Answer: A



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22. Cristae are associated with:

A. Endoplasmic reticulum

B. Mitochondria

C. Cytoplasm

D. Protoplasm

Answer: B



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23. Centrosome is not present in the cell of

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

Answer: A



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24. A cell swells up when kept in

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

Answer: C



Watch Video Solution

25. Site for protein synthesis is

A. Ribosome

B. SER

C. Golgi body

D. Lysosome

Answer: A



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26. Which of the following is a prokaryote?

A. Amoeba

B. Spirogyra

C. Bacteria

D. Chlamydomonas

Answer: C



Watch Video Solution

27. Which is essential for root hair growth

Or

The mineral present in cell wall is

A. Na

B. Ca

C. K

D. Mg

Answer: B



Watch Video Solution

28. Cell theory was proposed by

A. Virchow

B. Schleiden and Schwann

C. Robert Hooke

D. B. McClintock

Answer: B



Watch Video Solution

29. Which organelle is present in more number in secretory cells?

A. Dictyosomes

B. ER

C. Lysosomes

D. Vacuoles

Answer: A



View Text Solution

30. The organelles whose major function is storage of hydrolytic enzymes are

" " Or

Acid hydrolase is found in

A. Golgi body

B. ER

C. Lysosome

D. Vacuole

Answer: C



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31. RNA is not found in :

A. Chromosome

B. Plasmalemma

C. Nucleolus

D. Ribosome

Answer: B



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32. A chromosome with centromere in the middle is

A. Telocentric

B. Acrocentric

C. Metacentric

D. Dicentric

Answer: C



Watch Video Solution

33. Fluid mosaic model was proposed by:-

A. Singer and Nicolson

B. Davidson and Danielli

C. Robertson

D. Watson and Crick

Answer: A



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

A. Permease

B. Catalase

C. Gelatinase

D. Amylase

Answer: A



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35. Bacteria cell wall is composed of

A. Chitin

B. Murein

C. Pectin

D. Cellulose

Answer: B



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36. The two sub-units of ribosome remain united at a critical ion level of

A. Magnesium

B. Calcium

C. Copper

D. Manganese

Answer: A



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37. 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: C



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38. 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: D



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39. In germinating seeds, fatty acids are degraded exclusively in the

A. Peroxisomes

B. Mitochondria

C. Proplastids

D. Glyoxysomes

Answer: B



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40. Keeping in view the fluid mosaic model for the structure of cell membrane, which one of the following statements is correct with respect to the movement of lipids and proteins from one lipid mono layer to the other (described as flip flop movement)

- 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: D



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41. 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: C



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42. Cytoplasmic inheritance is due to : Itbr . 1.

cilia

2. cell wall

3. mitochondria

4. cytoplasmic particles

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: D



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43. Pick up the correct answers:

1. Mitochondrion contains DNA

2. 70 S ribosomes occur in prokaryotes

3. Ribosomes are made of phospholipids and oligosaccharides.

4. Ribosomes are not found in protista and monera.

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: D



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44. 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 endoplasmic reticulum

D. Plastids and inherited via male gametes

Answer: A



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

A. Presence of pigments

B. Possession of thylakoids and grana

C. Storage of starch, proteins and lipids

D. Ability to multiply by fission-like process

Answer: D



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46. Cell theory was proposed by

A. Virchow

B. Schleiden and Schwann

C. Robert Hooke

D. B. McClintock

Answer: B



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47. Acid hydrolases are found in :

A. Golgi body

B. ER

C. Lysosomes

D. Vacuole

Answer: C



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48. Which is essential for root hair growth

Or

The mineral present in cell wall is

A. Na

B. Ca

C. K

D. Mg

Answer: B



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49. Which organelle is present in higher number in secretory cells?

A. Dictyosomes

B. ER

C. Lysosomes

D. Vacuoles

Answer: A



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50. The type of cell junction which facilitates cell to cell communication is

A. Tight junction

B. Adhering junction

C. Gap junctions

D. Desmosomes

Answer: C



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51. 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: B



View Text Solution

52. Some of the enzymes, which are associated in converting fats into carbohydrates, are present in

" " Or

Site of gluconeogenesis is

A. Mitochondria

B. Golgi bodies

C. Glyoxisomes

D. None of these

Answer: C



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53. Which of the following subunit of ribosome is ribosome is composed of 23S rRNA and a 5S rRNA +32 different proteins

" " Or

The largest subunit of prokaryotic ribosomes is

A. 30 S

B. 40 S

C. 50 S

D. 60 S

Answer: C



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54. Which of the following is a part of endomembrane system of eukaryotic cell

A. Peroxisomes

B. Chloroplasts

C. Mitochondria

D. Golgi complex

Answer: D



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55. Small particles projecting from inner surfaces of cristae and inner mitochondrial membrane are

A. Myeloid bodies

B. Microsomes

C. Informosomes

D. Oxysomes

Answer: D



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56. There is no DNA in :

A. An enucleated ovum

B. Mature RBCs

C. Mature spermatozoan

D. Hair root

Answer: B



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57. Middle lamella is mainly composed of

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

Answer: C



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58. Plasmodesmata are

- A. Lignified cemented layers between cells
- B. Locomotory structures
- C. Membranes connecting the nucleus and
plasmalemma
- D. Connections between adjacent cells

Answer: D



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59. Cytoskeleton is made up of

A. Calcium carbonate granules

B. Callose deposits

C. Cellulosic microfilaments

D. Proteinaceous filaments

Answer: D



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60. Which of the following four cell 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 sacs containing chlorophyll and found in plant cells and algae

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

D. Golgi apparatus - Stacks of flattened
vesicles

Answer: D



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

(i) Homologous chromosomes move forward opposite poles of the cell: chromatids do not separate

II. Chromosomes gather together at the two poles of the cell and the nuclear membranes reform

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 :

$(iii) \rightarrow (iv) \rightarrow (i) \rightarrow (ii) \rightarrow (v)$ and

the process is meiosis-I.

B. The correct sequence is :

$(ii) \rightarrow (i) \rightarrow (v) \rightarrow (iv) \rightarrow (iii)$ 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 :

$(ii) \rightarrow (v) \rightarrow (iv) \rightarrow (i) \rightarrow (iii)$ and

the process is mitosis

Answer: A



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62. A cell, when kept in sugar solution, gets dehydrated. Then, the solution is

A. Hypotonic

B. Hypertonic

C. Isotonic

D. None of these

Answer: B



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63. Desmosomes are

A. Connecting bodies between cells

B. Fat storage cells

C. Pigment bodies

D. None of these

Answer: A



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64. Powerhouse of the cell is

A. Golgi bodies

B. Mitochondria

C. Ribosomes

D. Endoplasmic reticulum

Answer: B



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65. The prokaryotic cells are characterized by

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

Answer: D



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66. Endoplasmic reticulum is in continuation with

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

Answer: B



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67. In higher plants, the shape of the chloroplast is

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

Answer: A



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

A. Potassium

B. Calcium

C. Magnesium

D. Phosphorus

Answer: B



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69. Tonoplast is a membrane surrounding the

A. Vacuole

B. Cytoplasm

C. Nucleus

D. Mitochondria

Answer: A



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

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

Answer: A



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71. The enzyme for TCA cycle are present in

- A. Cytoplasm
- B. Inner membrane space of mitochondrion
- C. Mitochondrial matrix
- D. Inner mitochondrial membrane

Answer: C



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

A. Cisternae

B. Cristae

C. Vesicles

D. Tubules

Answer: A



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73. Plasmolysis is the result of

- A. Exosmosis
- B. Endosmosis
- C. Reverse osmosis
- D. Diffusion

Answer: A



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74. Flocculation or coagulation of protoplasm is the :

A. Interchangeability between sol and gel states

B. Ability to scatter the beam of light

C. Erratic zig-zag movements of protoplasmic particles

D. Ability of protoplasm to increase in size when they lose charges

Answer: A



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75. Quantasomes are present in :

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

Answer: A



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76. Which of the following cell organelle contains hydrolytic enzymes ?

A. Centrioles

B. Lysosomes

C. Chromoplasts

D. Chloroplasts

Answer: B



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77. Which of the following cell organelles is associated with photorespiration ?

A. Mitochondria

B. Peroxisomes

C. Chloroplast

D. All of these

Answer: D



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78. An elaborate network of filamentous proteinaceous structures present in the cytoplasm which helps in the maintenance of cell shape is called

A. Thylakoids

B. Endoplasmic reticulum

C. Plasmalemma

D. Cytoskeleton

Answer: D



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79. Digestive enzyme hydrolases are present in

A. Vacuole

B. Lysosomes

C. Golgi bodies

D. Mitochondria

Answer: B



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80. When a fresh water protozoan is placed in marine water

A. The contractile vacuoles become bigger
in size

B. The number of contractile vacuoles
increase

C. The contractile vacuoles disappear

D. The contractile vacuoles remain
unchanged

Answer: C



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81. The term plasmalemma was coined by

A. Strasburger

B. Plowe

C. Hooke

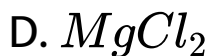
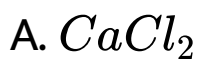
D. Robertson

Answer: B



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82. Cystolith contains



Answer: C



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83. Which of the following match is correct?

A. Oil storage - Rhodoplasts

B. Protein storage - Amyloplasts

C. Starch storage - Aleuoplasts

D. Fat storage - Elaioplasts

Answer: D



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84. Number of microtubules in a flagellum including those sharing three protofilaments with each other is

A. 11

B. 20

C. 22

D. 10

Answer: A



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85. The cytoplasm of adjacent plant cells is connected to each other by :

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

Answer: C



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86. 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. 1 and s arms

Answer: B



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87. Microfilaments in eukaryotic cells are made up of

A. Actin

B. Albumin

C. Globulin

D. Fibrin

Answer: A



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88. Present in nucleus is :

A. Golgi complex

B. Lysosome

C. Mitochondria

D. Chromosome

Answer: D



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89. Which of these is wrongly matched?

A. Chloroplasts - chlorophyll

B. Elaioplasts - starch

C. Chromoplasts - carotenoids

D. Amyloplasts - carbohydrates

Answer: B



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

A. Mitochondrion

B. Vacuole

C. Endoplasmic reticulum

D. Ribosome

Answer: D



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91. Consider the following statements

(A) Plant cells have centrioles which are absent in almost all animal cells

(B) Ribosomes are the site of protein synthesis

(C) The middle lamella is a layer mainly of calcium carbonate which holds the different neighbouring cells together

(D) In animal cell steroidal hormones are synthesized by smooth endoplasmicreticulum

Of the above statements

A. (A) and (B) only are correct

B. (C) and (D) only are correct

C. (B) and (D) only are correct

D. (A) and (D) only are correct

Answer: C



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92. What is mitoplast

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

Answer: C



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93. Cell theory is not applicable for

A. Bacteria

B. Fungus

C. Algae

D. Virus

Answer: D



[Watch Video Solution](#)

94. Mitochondria are semi-autonomous as they possess

A. DNA

B. DNA +RNA

C. DNA + RNA + Ribosomes

D. Proteins

Answer: C



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

A. Malthias Schleiden

B. Theodore Schwann

C. Malthias Schleiden & T. Schwann

D. Rudolf Virchow

Answer: D



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96. Na^+ / K^+ pump in a cell is an example of

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

Answer: D



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97. Active transport is characterized by

A. Requires special membrane protein

B. Highly selective

C. Requires ATP's energy

D. All of these

Answer: D



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98. A typical nucleosome 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: B



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99. The cell membranes of adjacent cells are fused at this cell junction

A. Macula adherens

B. Zonula adherens

C. Zonula occludens

D. Nexus

Answer: C



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

A. Endoplasmic reticulum

B. Golgi bodies

C. Lysosomes

D. Peroxisomes

Answer: C



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101. Important site for formation of glycoproteins and glycolipids is

A. Vacuole

B. Golgi apparatus

C. Plastid

D. Lysosome

Answer: B



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102. Peptide synthesis inside a cell takes place
in

A. Chloroplast

B. Mitochondria

C. Chromoplast

D. Ribosomes

Answer: D



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103. What are those structures that appear as 'beads-on-string' in the chromosomes when viewed under electron micro- scope?

A. Genes

B. Nucleotides

C. Nucleosomes

D. Base pairs

Answer: C



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104. In eubacteria, a cellular component that resembles eukaryotic cell is

A. Plasma membrane

B. Nucleus

C. Ribosomes

D. Cell wall

Answer: A



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105. Two percent solution of NaOH as compared to 18 per cent solution of glucose is

:

A. Isotonic

B. Hypotonic

C. Hypertonic

D. None of these

Answer: B



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

A. Lysosome

B. Chloroplast

C. Ribosome

D. Mitochondrion

Answer: C



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107. Detoxification of lipid soluble drugs and other harmful compound in ER is carried out by cytochrome

A. Cytochrome P 450

B. Cytochrome bf

C. Cytochrome C

D. Cytochrome $a_1 - a_2$

Answer: A



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108. Consider the following statements and select the correct option

A. The endomembrane system includes plasma

membrane, ER, Golgi complex, lysosomes and vacuoles

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

C. Ribosomes are involved in protein synthesis

D. Mitochondria help in oxidative phosphorylation and generation of ATP

A. B, C & D are correct

B. A-alone is correct

C. B-alone is correct

D. C-alone is correct

Answer: A



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109. The process by which water is absorbed by solid like colloids causing them to increase in volume is

A. Osmosis

B. Plasmolysis

C. Imbibition

D. Diffusion

Answer: C



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110. zone of exclusion surrounds

A. Golgi apparatus

B. Centrioles

C. Nucleus

D. Lysosome

Answer: A



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111. 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: B



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112. Glycocalyx is associated with

- A. Nucleolus
- B. Plasma membrane
- C. Nucleus
- D. Nucleosome

Answer: B



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113. When a cell is plasmolysed, it becomes

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

Answer: A



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114. Ribosomal RNA is actively synthesized in :-

A. Lysosomes

B. Nucleolus

C. Nucleoplasm

D. Ribosomes

Answer: B



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115. The correct sequence of cell organelles during photorespiration is

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

Answer: C



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116. Which one of the following is wrong statement?

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

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

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

D. Nitrosomonas and Nitrobacter are chemoautotrophs

Answer: C



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117. 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: B



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118. Nuclear membrane is absent in

A. Penicillium

B. Agaricus

C. Volvox

D. Nostoc

Answer: D



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119. Select the correct statement from the following regarding cell membrane.

- A. Na^+ and K^+ ions move across cell membrane by passive transport
- B. Proteins make upto 60 - 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: D



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120. Na^+ / K^+ pump is associated with

A. Passive transport

B. Active transport

C. Osmosis

D. Imbibition

Answer: B



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121. Which of the following is used for observing spindle fibres

" " or

The microscope usually used for seeing living cells or tissues

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

Answer: C





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

- A. Mitochondria
- B. Endoplasmic reticulum
- C. Ribosomes
- D. Nucleus

Answer: C



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123. Extranuclear DNA in the cytoplasm is found inside

A. Golgi bodies

B. Lysosomes

C. Vacuoles

D. Mitochondria

Answer: D



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124. The main arena of various types of activities of a cell is

" " Or

Proteins required for functioning of nucleus are formed in

A. Nucleolus

B. RER

C. Cytoplasm

D. Mitochondria

Answer: C



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125. Which of the following organelles is called suicidal bag of cell?

- A. Lysosome
- B. Mitochondria
- C. Peroxisome
- D. Glycocalyx

Answer: A



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126. 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: D



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127. Polytene chromosomes were discovered in

A. Chironomus

B. Drosophila

C. Neurospora

D. Rattus

Answer: A



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128. mRNA carries the genetic information from DNA to the

Or Which of the following is the site of translation of the mRNA

A. Nucleus

B. Nucleolus

C. Golgi body

D. Ribosomes

Answer: D



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

" "

The filaments associated with cilia and flagella are constituted by

A. Golgi apparatus

B. Microfilaments

C. Microtubules

D. Endoplasmic reticulum

Answer: C



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

A. All cells have cell wall

B. Animal 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: D



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131. The cell membranes of adjacent cells are fused at

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

Answer: C



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132. The usual axonemal arrangement of microtubules is

A. 6 pairs of doublets 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 microtubule

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: C



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133. When the chromosome has a centromere nearer to one end of the chromosome

resulting into one shorter and one longer arm,
the chromosome is termed as

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

Answer: C



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134. The shape of the cocci bacteria is

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

Answer: B



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135. Which of the following is seen only in prokaryotic cells

A. Dictyosome

B. Ribosomes

C. Mesosomes

D. Endoplasmic reticulum

Answer: C



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

- A. Middle lamella
- B. Primary wall
- C. Mitochondria
- D. Plasmodesmata

Answer: D



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137. Choose the wrong statement regarding bacterial cell

A. Glycocalyx is the outer most envelope in bacteria

B. The glycocalyx could be a loose sheath called capsule

C. The glycocalyx may be thick and tough called slime layer

D. A special structure formed by the plasma membrane is called mesosome

E. Small bristle like fibers 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: C



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138. Consider the following statements

A. In prokaryotic cells a special membranous structure formed by the 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 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: A



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139. Consider the following statements with reference to facilitated transport

A. Requires ATP energy

B. Transport saturates

C. Highly selective

D. Requires special membrane properties

E. Uphill transport

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 A and D are
irrelevant

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

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

Answer: D



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140. Pigment-containing membranous extensions in some cyanobacteria are

A. Heterocysts

B. Basal bodies

C. Pneumatophores

D. Chromatophores

Answer: D



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141. A major site for synthesis of lipids is

A. RER

B. SER

C. Symplast

D. Nucleoplasm

Answer: B



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142. The Golgi complex plays a major role

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

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

Answer: D



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143. 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: C



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144. The movement of cilia and flagella is due to the presence of

A. Radial spokes

B. Central sheath

C. Singlet microtubules

D. Dyneins

Answer: D



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145. The motile bacteria are also to move by

A. Cilia

B. Pili

C. Fimbriae

D. Flagella

Answer: D



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146. Fructose is absorbed into the blood through mucosa cells of intestine by process called

A. Simple diffusion

B. Co-transport mechanism

C. Active transport

D. Facilitated transport

Answer: D



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

A. Plastid

B. Ribosomes

C. Mitochondria

D. Vacuoles

Answer: D



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148. 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: D



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149. Which structures perform the function of mitochondria in bacteria

A. Cell wall

B. Mesosomes

C. Nucleoid

D. Ribosomes

Answer: B



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150. The structures that are formed by stacking of organized flattened membranes sacs in the chloroplasts are

A. Cristae

B. Grana

C. Stroma lamellae

D. Stroma

Answer: B



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151. the chromosomes in which centromere is situated close to one end are :

A. Metacentric

B. Acrocentric

C. Telocentric

D. Sub-metacentric

Answer: B



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152. Select the correct matching in the following pairs:

A. Smooth ER = oxidation of phospholipids

B. Smooth ER = Synthesis of lipids

C. Rought ER = synthesis of glycogen

D. Rough ER = oxidation of fatty acids

Answer: B



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153. True nucleus is absent in

A. Anabaena

B. Mucor

C. Vaucheria

D. Volvox

Answer: A



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

A. Phosphate granule

B. Cyanophycean granule

C. Glycogen granule

D. Polysome

Answer: D



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155. DNA is not present in :

A. Chloroplast

B. Ribosomes

C. Nucleus

D. Mitochondria

Answer: B



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156. Nuclear envelope is a derivative of

A. SER

B. Membrane of Golgi complex

C. Microtubules

D. RER

Answer: D



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157. Balbiani rings are sites of

- A. Lipid synthesis
- B. Nucleotide synthesis
- C. Polysaccharide synthesis
- D. RNA and protein synthesis

Answer: D



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158. In angiosperms, microsporogenesis and megasporogenesis

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

Answer: C



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159. Which of the following are not membrane-bound?

A. Vacuoles

B. Ribosomes

C. Lysosomes

D. Mesosomes

Answer: B



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160. The function of the gap junction is to

A. Performing cementing to keep

neighbouring cells together.

B. Facilitate communication between

adjoining cells by connecting the

cytoplasm for rapid movement of ions,

small molecules and some large molecules.

C. Separate two cells from each other

D. Stop leaking of substance across a tissue

Answer: B



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161. The structure that help some bacteria to attach to rocks and host tissues are

A. Rhizoids

B. Fimbriae

C. Mesosomes

D. Hold fast

Answer: B



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162. In photosynthesis, the light-independent reactions take place in

A. Thylakoid lumen

B. Photosystem-I

C. Photosystem-II

D. Stromal matrix

Answer: D



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163. Cellular organelles with membranes are

A. Nuclei, ribosomes and mitochondria

B. Chromosomes, ribosomes and ER

C. ER, ribosomes and nuclei

D. Lysosomes, Golgi apparatus and mitochondria

Answer: D



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164. Which of the below mentioned properties is not true with respect to facilitated transport?

A. Requires special membrane proteins

B. Transport saturates

C. Uphill transport

D. Highly selective

Answer: C



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165. Which of the below mentioned structures do not form a part of the endomembrane system

A. Golgi complex

B. ER

C. Mitochondria

D. Vacuoles

Answer: C



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166. Chloroplasts in higher plants are
_____ shaped :

A. Kidney

B. Lens

C. Bean

D. Dome

Answer: B



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167. They help in respiration , They help in cell wall formation

They help in DNA replication , They increase

surface area of plasma membrane. They are prokaryotic structures.

A. Chromosomes

B. Ribosomes

C. Mesosomes

D. Lysosome

Answer: C



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168. A cell organelle containing hydrolytic enzymes is

A. Mesosome

B. Lysosome

C. Microsome

D. Ribosome

Answer: B



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169. 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 -TRNA

Answer: D



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170. Mitochondria and chloroplast are

(a) Semi-autonomous organelles

(b) Formed by division of pre-existing organelles and they contain DNA but lack protein synthesizing machinery

Which one of the following options is correct

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: D



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171. Water soluble pigments found in plant cell vacuoles are

A. Anthocyanins

B. Xanthophylls

C. Chlorophylls

D. Carotenoids

Answer: A



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172. Which of the following is not a feature of the plasmids

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

Answer: A



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173. A complex of ribosomes attached to a single strand of RNA is known as

A. Okazaki fragment

B. Polysome

C. Polymer

D. Polypeptide

Answer: B



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174. Microtubules are the constituents of

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

Answer: C



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

- A. Nuclei
- B. Mitochondria
- C. Chloroplasts
- D. Lysosomes

Answer: D



176. Which among the following are the smallest living cells, known without a definite cell wall, pathogenic to plants as well as animals and can survive without oxygen ?

- A. Bacillus
- B. Pseudomonas
- C. Mycoplasma
- D. Nostoc

Answer: C



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177. Which of the following cell organelles is responsible for extracting energy from carbohydrates to form ATP?

A. Lysosome

B. Ribosome

C. Chloroplast

D. Mitochondrion

Answer: D



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178. Which of the following RNAs should be most abundant in animal cell

A. r-RNA

B. t-RNA

C. m-RNA

D. mt-DNA

Answer: A



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179. The Golgi complex participates in

- A. Fatty acid breakdown
- B. Respiration in bacteria
- C. Formation of secretory vesicles
- D. Activation of amino acids

Answer: C



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180. Which of the following is true for nucleolus?

- A. Larger nucleoli are present in dividing cells
- B. It takes part in spindle formation
- C. It is a membrane-bound structure
- D. It is a site for active ribosomal RNA Synthesis

Answer: D



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181. Which of the following events does not occur in rough endoplasmic reticulum,

- A. Protein folding
- B. Cleavage of signal peptide
- C. Protein glycosylation
- D. Phospholipid synthesis

Answer: D



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182. Select the incorrect match:

A. Lampbrush chromosomes : Diplotene bivalents

B. Submetacentric chromosomes : L-shaped chromosomes

C. Allosomes : Sex chromosomes

D. Polytene chromosomes : Oocytes of amphibians

Answer: D



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183. Many ribosomes may associate with a single mRNA to form multiple copies of a polypeptide simultaneously. Such strings of ribosomes are termed as

A. Polysomes

B. Plastidomes

C. Polyhedral bodies

D. Nucleosomes

Answer: A



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**Competition File Objective Type Questions B
Cbse Pmt Main Examination Questions**

1. (a) Label the parts of interphase nucleus (1, 2, 5, 6).

(b) Write the function of 3 and 4.



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2. Match the Column I with Column II (at least ten)



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3. Fill in the blanks :

(i) Biomembrane consists of phospholipids which has one unit of _____ and two units of _____ and phosphate group.



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4. Fill in the blanks :

Most of food stored in the higher plants is in the form of _____ but their cell wall is formed of _____



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5. Write the function of the following: (a) Microtubules (b) Sphaerosome (c) Endodermis (d) Companion cells (e) Lenticles



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6. What is nucleosome ? How many base pairs are present in a typical nucleosome ?



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7. Fill in the blanks :

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



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8. Mitochondria and Chloroplasts are similar in having-

(a) two membranes (b) Cristae

(c) DNA (d) Ribosomes

(e) Thylakoids



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9. In mitochondria, protons accumulate in the

A. Intermembrane space

B. Matrix

C. Outer membrane

D. Inner membrane

Answer: A



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10. Which one of the following is not considered as a part of the endomembrane system ?

A. Vacuole

B. Lysosome

C. Golgi complex

D. Peroxisome

Answer: D



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11. Which one of the following structures is an organelle within an organelle

" " Or

Which of the following cell organelle lacks DNA and bounding membrane

A. Ribosome

B. Peroxisome

C. ER

D. Mesosome

Answer: A



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12. Which one of the following cellular parts is correctly described

A. Thylakoids-flattened membranous sacs

forming the grana of chloroplasts

B. Centrioles sites for active RNA synthesis

C. Ribosomes - those of chloroplasts are larger (80S) while those of the cytoplasm are smaller (70 S)

D. Lysosomes - optmally active at a pH of about 8.5

Answer: A



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**Competition File Objective Type Questions D
Assertion Type Questions**

1. Assertion : Highest state of entropy in the living system is at death

Reason: Free energy is required to prevent death.

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

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

C. If Assertion is true but Reason is false.

D. If both Assertion and Reason are false.

Answer: B



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2. Assertion : A fully turgid cells is called plasmolysed.

Reason: Plasmolysis involves endosmosis of water.

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

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

C. If Assertion is true but Reason is false.

D. If both Assertion and Reason are false.

Answer: D



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3. Assertion : Fluidity of plasma membrane is due to presence of phospholipids.

Reason: Fatty acids of the phospholipids have kinks which do not allow the packing of molecules.

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

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

C. If Assertion is true but Reason is false.

D. If both Assertion and Reason are false.

Answer: A



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4. Assertion : Active transport is a vital process.

Reason: Active transport is inhibited by low temperature and presence of cyanides.

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

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

C. If Assertion is true but Reason is false.

D. If both Assertion and Reason are false.

Answer: A



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5. Assertion : Depolarization is an active process.

Reason: In depolarization, Na^+ ions move from lower concentration to higher concentration.

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

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

C. If Assertion is true but Reason is false.

D. If both Assertion and Reason are false.

Answer: D



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6. Assertion : Passive processes like diffusion and osmosis do not require energy.

Reason: Because the plasma membrane is a static membrane.

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

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

Assertion.

C. If Assertion is true but Reason is false.

D. If both Assertion and Reason are false.

Answer: C



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7. Assertion. Cyanobacteria are photosynthetic blue-green algae with procaryotic structure.

Reason. They are green due to presence of chloroplasts.

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

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

C. If Assertion is true but Reason is false.

D. If both Assertion and Reason are false.

Answer: C



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8. Assertion. Specialisation of cells is advantageous to organisms.

Reason. It increases operational efficiency

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

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

C. If Assertion is true but Reason is false.

D. If both Assertion and Reason are false.

Answer: A



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9. Assertion : The number of cells in a multicellular organism is inversely proportional to the size of body.

Reason : All the cells in the biological world are of same size.

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

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

C. If Assertion is true but Reason is false.

D. If both Assertion and Reason are false.

Answer: D



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10. Assertion : It is important that the organisms should have cell.

Reason : A cell keeps its chemical composition steady within its boundary.

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

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

Assertion.

C. If Assertion is true but Reason is false.

D. If both Assertion and Reason are false.

Answer: B



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11. Assertion : A cell membrane shows fluid behaviour.

Reason : A membrane is a mosaic or composite of diverse lipids and proteins.

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

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

C. If Assertion is true but Reason is false.

D. If both Assertion and Reason are false.

Answer: B



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12. Assertion : Mitochondria and chloroplasts are semiautonomous organelles.

Reason : They are formed by division of pre-existing organelles as well as contain DNA but lack protein synthesizing machinery

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

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

C. If Assertion is true but Reason is false.

D. If both Assertion and Reason are false.

Answer: C



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13. Assertion . Polytene chromosomes have a high amount of DNA.

Reason Polytene chromosomes are formed by repeated replication of chromosomal DNA without separation of chromatids

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

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

Assertion.

C. If Assertion is true but Reason is false.

D. If both Assertion and Reason are false.

Answer: A



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14. 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 five

responses.

Assertion: Eukaryotic cells have the ability to adopt a variety of shapes and carry out directed movements.

Reason: There are three principal types of protein filaments – microfilaments, microtubules and intermediate filaments, which constitute the cytoskeleton.

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

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

C. If Assertion is true but Reason is false.

D. If both Assertion and Reason are false.

Answer: B



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15. Assertion : A cell membrane shows fluid behaviour.

Reason : A membrane is a mosaic or composite of diverse lipids and proteins.

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

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

C. If Assertion is true but Reason is false.

D. If both Assertion and Reason are false.

Answer: B



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**Competition File Objective Type Questions E
Additional Multiple Choice Questions**

1. Organelle involved in modification and routing of newly synthesised proteins to their

destination is

A. Mitochondria

B. Endoplasmic reticulum

C. Lysosome

D. Chloroplast

Answer: B



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2. Chlorophyll in chloroplasts is located in –

A. Grana

B. Pyrenoid

C. Stroma

D. Both grana and stroma

Answer: A



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3. According to widely accepted "Fluid mosaic model" cell membranes are semi-fluid, where lipids and integral proteins can diffuse

randomly. In recent years, this model has been modified in several respects. In this regard, which of the following statements is incorrect

A. Proteins can travel within the lipid bilayer

B. Proteins can remain confined within certain domains of membrane

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

D. Many proteins remain completely embedded within lipid bilayer

Answer: D



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4. Centromere is required for

A. Transcription

B. Crossing over

C. Cytoplasmic cleavage

D. Movement of chromosomes towards poles

Answer: D



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5. Which of the following is the simplest amino acid

A. Alanine

B. Asparagine

C. Glycine

D. Tyrosine

Answer: C



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6. Chemiosmotic theory of ATP synthesis in the chloroplasts and mitochondria is based on

A. Membrane potential

B. Accumulation of Na^+ -ions

C. Accumulation of K^+ -ions

D. Proton gradient

Answer: D



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

A. Plasma membrane

B. Cytoskeleton

C. Mitochondria

D. Plastids

Answer: D



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8. Which one of the following statements is wrong?

A. Lysosomes are double membranous vesicles budded off from Golgi body and

contain digestive enzymes

B. ER consists of a network of tubules and helps in transport, synthesis and secretion

C. Leucoplasts are bounded by two membranes, lack pigment but contain DNA and protein forming machinery

D. Sphaerosomes are single membrane bound and help in synthesis and storage of lipids

Answer: A



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9. In which one of the following would you expect to find glyoxysomes

- A. Endoplasm of wheat
- B. Endoplasm of castor
- C. Palisade cells of leaf
- D. Root hairs

Answer: B



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10. Main function of dictyosomes is

A. Respiration

B. Storage

C. Secretion

D. Breakdown of fats

Answer: C



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11. Which of the following is not a character of prokaryote :-

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

Answer: B



12. Cell theory was given by

- A. Robert Hooke
- B. Robert Brown
- C. Schleiden and Schwann
- D. Messelson and Stahl

Answer: C



13. Phagosomes and pinosomes are collectively called

- A. Lysosomes
- B. Glyoxysomes
- C. Sphaerosomes
- D. Endosomes

Answer: D



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14. Crystals of calcium carbonate forming bunches in the epidermal cells of certain leaves are

A. Sphaerosides

B. Raphides

C. Otoliths

D. Cystoliths

Answer: D



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15. If a plant cell is placed in a solution less concentrated than that of cell sap, water from outside will enter into the protoplasm through the process of:

A. Endosmosis

B. Diffusion

C. Imbibition

D. Plasmolysis

Answer: A



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16. Ribosome

A. Consists of a large and two small subunits

B. Contains identical components in prokaryote and eukaryote

C. Is the site of only RNA replication

D. Has two or three sites for t-RNAs

Answer: D





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17. Racker's particles occur in :

A. Chromosomes

B. Nucleus

C. Golgi complex

D. Mitochondria

Answer: D



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18. The core metal of chlorophyll is

Or

Which element is left when chlorophyll is burnt

A. Fe

B. Cu

C. Ni

D. Mg

Answer: D



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19. A single unit membrane surrounds the organelle

A. Lysosome

B. Nucleus

C. Microsome

D. Chloroplast

Answer: A



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20. The membrane around the vacuole is called :

A. Tonoplast

B. Cytoplast

C. Leucoplast

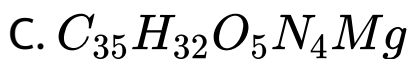
D. Amyloplast

Answer: A



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21. The formula of chlorophyll 'a' is



D.

Answer: A



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22. Cell membrane is

A. Semipermeable

B. Permeable

C. Selectively permeable

D. Impermeable

Answer: C



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

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

Answer: B



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24. Organelle associated with aerobic respiration is

A. Nucleus

B. Centriole

C. Chloroplast

D. Mitochondria

Answer: D



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25. Plasma membrane helps in

A. Osmoregulation

B. Protein synthesis

C. Nucleic acid synthesis

D. Transportation of only water in and out
of cell

Answer: A



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

A. Ribosome

B. Nucleus

C. Chloroplast

D. Mitochondria

Answer: A



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27. Centrioles take part in formation of :

A. Cell plate

B. Spindle

C. Nucleolus

D. Start of cell division

Answer: B



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28. Phytol chain is present in

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

Answer: B



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29. Amyloplasts are particles storing :

A. Starch

B. Proteins

C. Fats

D. All of these

Answer: A



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30. Element necessary for the middle lamella

A. Ca

B. K

C. Cu

D. Zn

Answer: A



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Competition File Objective Type Questions
Multiple Choice Questions

1. Many ribosomes may associate with a single mRNA to form multiple copies of a polypeptide simultaneously. Such strings of ribosomes are termed as

- A. Polysomes
- B. Plastidomes
- C. Polyhedral bodies
- D. Nucleosomes

Answer:



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2. The shorter and longer arms of a submetacentric chromosome are referred to as :

- A. s-arm and l-arm respectively
- B. p-arm and q-arm respectively
- C. q-arm and p-arm respectively
- D. m-arm and n-arm respectively

Answer:



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3. Which of the following pair of organelles does not contain DNA?

- A. Mitochondria and lysosomes
- B. Chloroplast and vacuoles
- C. Lysosomes and vacuoles
- D. Nuclear envelope and mitochondria

Answer:



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4. Which of the following statements regarding mitochondria is incorrect ?

A. Outer membrane is permeable to monomers of carbohydrates, fats and proteins

B. Enzymes of ETS are embedded in outer membrane

C. Inner membrane is convoluted with insuldings

D. Mitochondrial matrix contains single circular DNA molecule and ribosomes

Answer:



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5. The concept of "Omnis cellula-e cellula" regard cell division was first proposed by :

- A. Rudolf Virchow
- B. Theodore Schwann
- C. Schleiden
- D. Aristotle

Answer:



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6. Which of the following lacks membranous covering ?

A. Mitochondria

B. Vacuole

C. Ribosome

D. Chloroplast

Answer:



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Chapter Practice Test

1. What is facilitated diffusion ?



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2. Differentiate between pinocytosis and phagocytosis.



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3. Why are lysosomes known as suicide bags?



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4. Differentiate between chromoplasts and Leucoplasts.



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5. Give difference between 70 S and 80 S ribosomes.



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Chapter Practice Test Section A

1. Acid hydrolases are found in:

A. Golgi body

B. ER

C. Lysosomes

D. Ribosomes

Answer: C



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2. Cell theory was proposed by

A. Robert Hooke

B. Schleiden and Schwann

C. Rudolf Virchow

D. Robert Brown

Answer: B



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3. Quantasomes are present in:

A. Chloroplasts

B. Mitochondria

C. Golgibody

D. Lysosomes

Answer: A



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4. Select the amembranous cell organelle:

A. Vacuoles

B. Ribosomes

C. Lysosomes

D. Golgi body

Answer: B



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5. What is polysome?

A. When many lysosomes are present in the cytoplasm

B. When many free ribosomes are present in the cytoplasm

C. When many interlinked ribosomes are present in the cytoplasm

D. When many ribosomes are linked on same mRNA strand

Answer: D



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6. Which of the following cell organelles is involved in glycosylation of lipids and proteins?

A. Golgibody

B. ER

C. Mitochondria

D. Ribosomes

Answer: A



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Chapter Practice Test Section B

1. List three differences between Gram positive and Gram negative bacteria.



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2. What are mesosomes? Give their functions.



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3. Differentiate between Rough Endoplasmic Reticulum (RER) and Smooth Endoplasmic Reticulum (SER).



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4. Draw a neat and labelled diagram of a chloroplast.



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5. List four structural characteristics of prokaryotic cells.



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Chapter Practice Test Section C

1. What is centromere? Describe types of chromosomes on the basis of position of centromere.



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2. Draw T.S. of a centriole. Enlist its functions.



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3. Give difference between 70 S and 80 S ribosomes.



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4. List two functions of each of following cellular structures:

(i) Vacubles (ii) Microfilaments (iii) Lysosomes



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5. (i) Draw a neat and labelled diagram of fluid mosaic model of plasma membrane.

(ii) Why are phospholipid molecules of it called amphipathic molecules?

(iii) State one difference between pinocytosis and phagocytosis.



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Chapter Practice Test Section D

1. Nucleus is commonly called director of the cell because it controls all the cellular functions. A true nucleus is present in the eukaryotic cells. A true nucleus has four components, each of which is adapted for specific function. Answer the following questions related to a true nucleus:

- (i) Name four components of a true nucleus.
- (ii) Which of these nuclear components is involved in storage of ribosomal RNA?
- (iii) Which of nuclear components helps in nuclear-cytoplasmic interactions?



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Chapter Practice Test Section E

1. (i) Draw a neat and labelled diagram of a mitochondrion.

(ii) What are cristae? Give their function.

(iii) Why is mitochondrion called a semiautonomous organelle?



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