1. A bivalent consists of
2. Two chromatids and one centromere
3. Two chromatids and two centromeres
4. Four chromatids and two centromeres
5. Four chromatids and four centromeres
6. Angstrom (a) is equal to
7. 0.01µm
8. 0.001µm
9. 0.0001µm
10. 0.00001µm
11. All plastids have similar structure because they can
12. Store starch, lipids and proteins
13. Get transformed from one type to another
14. Perform same function
15. Be present together
16. Match the columns and select the correct option

|  |  |
| --- | --- |
| Column I | Column II |
| 1. Cisternae 2. Thylakoid 3. Cristae 4. Microtubule | 1. Proteinaceous structure in cytoplast 2. Infolding of inner mitochondrial membrane 3. Flattened membranous sac 4. Membranous structure in Golgi complex |

1. A-iv, B-ii, C-iii, D-i
2. A-ii, B-iv, C-ii, D-i
3. A-I, B-ii, C-iv, D-iii
4. A-iv, B-iii, C-ii, D-i
5. Cell recognition and adhesion occur due to biochemicals of cell membranes named
6. Proteins
7. Lipids
8. Proteins and lipids
9. Glycoproteins and glycolipids
10. In plant cells, peroxisomes are associated with
11. Photorespiration
12. Phototropism
13. Photoperiodism
14. Photosynthesis
15. Besides giving out secretory vesicles, the Golgi apparatus is also concerned with the formation of
16. Lysosomes
17. Plastids
18. Grana of chloroplasts
19. Cell plates after cell division in plants
20. In mitochondria, cristae act as sites for
21. Protein synthesis
22. Phosphorylation of flavoproteins
23. Breakdown of macromolecules
24. Oxidation-reduction reaction
25. Which cell organelle is concerned with glycosylation of protein?
26. Ribosome
27. Peroxisome
28. Endoplasmic reticulum
29. Mitochondria
30. Proteinaceous pigment which controls the activities concerned with light is
31. Phytochrome
32. Chlorophyll
33. Anthocyanin
34. Carotenoids
35. Which of the following statements regarding cilia is not correct?
36. cilia contain an outer ring of nine doublet microtubules surrounding two singlet microtubules
37. the organized beating of cilia is controlled by fluxes of Ca2+ across the membrane
38. cilia are hair –like cellular appendages
39. microtubules of cilia are composed of tubulin
40. Select the wrong statement from the following
41. both chloroplasts and mitochondria have an internal compartment, the thylakoid bounded by the thylakoid membrane
42. both chloroplast and mitochondria contain DNA
43. the chloroplasts are generally much longer than mitochondria
44. both chloroplast and mitochondria contain an inner and an outer membrane
45. The longest cell in plant kingdom is
46. sieve tube
47. vessel
48. sclerenchyma fibre
49. tracheid
50. Adjacent epithelial cells are held together by means of
51. Desmosomes
52. Microsomes
53. Glyoxysomes
54. Lysosomes
55. Which of the following statements correctly characterizes membrane protein
56. content is constant in cells with different functions
57. polypeptide chains can extend across the lipid bilayer ones or multiple times
58. membrane protein includes integral proteins associated with extracellular surface
59. membrane protein includes peripheral proteins bound to phospholipids in the membrane bilayer
60. Lampbrush chromosomes are seen in which typical stage?
61. Mitotic metaphase
62. Meiotic prophase
63. Mitotic anaphase
64. Mitotic prophase
65. During cell division in apical meristem, the nuclear membrane appears in
66. Telophase
67. Cytokinesis
68. Metaphase
69. Anaphase
70. How many times a cell has to divide mitotically to produce 128 cells?
71. 127
72. 126
73. 128
74. 7
75. G1 stage of interphase of cell cycle shows
76. active synthesis of RNA
77. active synthesis of protein
78. both (a) and (b)
79. active synthesis of DNA
80. Longitudinal duality of each chromosome of a homologous pair becomes clearly evident showing formation of four chromatide from each bivalent at
81. Diplotene
82. Pachytene
83. Zygotene
84. Diakinesis
85. Tetrad is made of
86. Four homologous chromosomes with four chromatids
87. Two homologous chromosomes, each with two chromatids
88. Four nonhomologous chromatids
89. Four nonhomologous chromosomes
90. The point, at which polytene chromosomes appear to be attached together, is called
91. Centriole
92. Chromomere
93. Centromere
94. Chromocentre
95. Pick out the correct statements
96. Mitosis takes place in the somatic cells and meiosis takes place in the germ cells
97. During mitosis, the DNA replicates once for one cell division and the meiosis the DNA replicates twice for two cell divisions
98. Mitosis and meiosis occur both in sexually and asexually reproducing organisms
99. A only
100. B only
101. C only
102. A and B only
103. During cell division, sometimes there will be failure of separation of sister chromatids. This event is called
104. Interference
105. Complementation
106. Non- disjunction
107. Coincidence
108. Colchicine is an inhibitory chemical which prevents
109. Functioning of centriole
110. Spindle formation in mitosis
111. Formation of equatorial plane
112. Attaching of centromere with rays
113. Spindle fibers of a mitotic cells are made up of
114. Actin
115. Collagen
116. Myosin
117. Tubulin
118. The time period between meiotic 1 and meiotic 2 cell divisions is called
119. Growth phase
120. 1st gap period
121. Interkinesis
122. Interphase
123. A bacterium divides every 35 minutes. If a culture containing 105 cells per ml is grown for 175 min., what will be the cell concentration per ml after 175min?
124. 175
125. 32
126. 5
127. 35
128. The number of chromosomes is reduced to half in first reduction division of meiosis, then what is the need for second meiotic division?
129. For the formation of four haploid gametes
130. For the segregation of replicated chromosomes
131. For the equal distribution of genes in chromosomes
132. For the equal distribution of diploid chromosomes
133. A cell has 23 pairs of chromosomes just after completion of mitotic telophase. The number of chromatids at the preceding metaphase will be,
134. 23
135. 46
136. 69
137. 92