

1. Which of the following is not included in the glycocalyx? Steroids
2. Which of the following are not characteristic friction for
3. Organelles involved in rectory pathway? All are true except peroxisomes.
4. Electrically excited cells are? All are true except adipocytes.
5. Which substances are detected by periodic acid shift PAS staining method? Glycolipids & Glycoproteins.
6. Which of the following are inorganic compounds of the cell? Water
7. Microtubules..which of the following statement is true? Have a wall composed of 13 protofilament.
8. Which of the following statements regarding lysosomes is true? Optimal pH is 5.0
9. The middle segment of chromosomes is known as.. Centromere.
10. All of the following cell junctions are associated with the cytoskeleton except? Nexus (Gap junctions).
11. Synaptical vesicles..are all true except? Do not have a membrane.
12. Cytoskeleton motor proteins are..all are true except? Vimentin.
13. The division of the nucleus is referred to as? Mitosis.
14. Where are localised the fibres of the nuclear lamina? Just inside the inner nuclear membrane.
15. Which of the following regarding cell shape is not true? Smooth muscle cells are cuboidal cells.
16. Integrins are..all are true except? Intermediate filament receptors.
17. All of the following structures contain microtubules except? Microvilli.
18. All of the following are cell to cell junctions except? Hemidesmosomes
19. Which statement regarding peroxisomes is true? Peroxisomes are generated from pre-existing peroxisomes.
20. Secretory granules..all are true except? Are returned to the Rough ER for recycling.
21. Which is the range of thickness of the biological membranes? 5-10µm.
22. F-actin is found in? Microfilaments.
23. Components of the nuclear envelope..all are true except? Chromatin.
24. Which of the following statements related to the Golgi Complex is not true? It is a semi autonomous organelle that contains DNA, RNA & Ribosomes.
25. Autophagosomes are typical for? Lymphocytes.
26. The cytosol..which of the following statements is not true? Contains ions and small proteins.
27. Intermediate filaments are composed of? Keratin.
28. Synaptic vesicles..all are true except? Use microtubules for their movement.
29. Smooth ER is not involved in? Protein synthesis.
30. Ribosomes can attach to which of the following? Outer nuclear membrane.
31. Ca<sup>2+</sup> release from the endoplasmic reticulum takes place via? Voltage sensitive Ca<sup>2+</sup> channels.
32. Extracellular proteins such as hormones achieve their effect on the cells by the means of? Transmembrane receptors.
33. Secretory proteins..all are true except? Are translocated into the nucleus.
34. Which of the cells have a prominent rough ER? Adrenal gland cells.
35. The parts of DNA which are not exposed are concentrated in..? Heterochromatin.
36. Amino-oxidase and catalase are characteristic enzymes of..? Peroxisomes.
37. Microtubules..all are true except? Are the thick filaments of the sarcomere.
38. Intermediate filaments are associated with which of the following cell functions? Desmet.
39. Organelle included in the secretory pathway..All are true except? Peroxisomes.
40. Which of the following is not a component of the plasma membrane? Nucleic acids.
41. Which of the following substance is not a component of the biomembrane? Melanin.

42. Microfilaments..Consist of globular actin monomers forming a double helix.
43. Which of the following of the cell matrix function is true? Regulates intracellular traffic of the molecule.
44. Which of the following statements regarding the Golgi Complex is true? It is the site of protein glycosylation.
45. Intracellular targeting of vesicles depends on? Snare-Snare Interactions.
46. The Barr-body corresponds to? Heterochromatin.
47. Integrins..Link the Extracellular Matrix with the Cytoskeleton.
48. The chromatin contains the following elements..All are true except? RNA.
49. Microtubules..all are true except? Associate with Myosin.
50. Major mitochondrial compartments are..All are true except? Mitochondrial pores.
51. Which of the following is not a characteristic of living matter? Refraction.
52. Tissues grow in size because of the following processes..All are true except? Apoptosis.
53. Ageing is associated with which type of processes..All are true except? Hyperplasia.
54. The main molecular railroads for intracellular transport are? Microtubules.
55. Biological membranes..Which of the following is not true? Organise the mitotic spindle during cell division.
56. Which of the following statements about cell matrix functions are true? It regulates intracellular traffic of molecules and organelles.
57. The cytoplasmic inclusions...? ALL answers are correct.
58. Ribosomes are..All are true except? Related in function to lipid synthesis.
59. Apoptosis is..All are true except? A spontaneous process.
60. Cell crystals..Crystalline forms of protein.
61. Which family of proteins are excretions of apoptosis? Caspases.
62. Which of the following statements related to histological techniques is not true? Paraffin embedding includes processing of the material.
63. Which of the following about eukaryotic/prokaryotic cells is not true? Prokaryotic cells are cells with a nuclear envelope.
64. All of the following statements regarding pigment deposits are true except? Globin is a pigment.
65. Movement of which type of particle is involved in the generation of ATP? Proton.
66. Signal recognition particle/SR receptors are required for the translocation of..? Secretory Proteins.
67. Cells participating in closing the wound during..? Myofibroblasts.
68. Which cell type has a squamous shape? Endothelial cells.
69. Which of the following statements about plasmalemma is true? Ion channels are transmembrane proteins
70. Which of the following membrane proteins are not localised in the plasma membrane? Histone molecules.
71. Which of the cell types have more than one nucleus? All are true except..Neutrophil Leukocytes.
72. Which of the following statements about lysosomes is not true? Optimal pH of lysosomal digestion is pH 8.0
73. Which of the following molecules are material carrier of life? Protein & Nucleic acids.
74. Golgi Complex-RER communication requires .. COP coated vesicles.
75. Clathrin coated vesicles are formed in..Trans Golgi network.
76. The change of cell shape requires which following organelles? Actin filaments.
77. Which is the size range for peroxisomes? 0.5-1.5mm.
78. Which of the cytoskeletal proteins is components of nuclear lamina? Intermediate filaments.

79. Secretory proteins..Are not translocated into the RER.
80. Which type of molecules can pass through the nuclear pore? Molecules with a nuclear localisation signal.
81. Which phase of the mitotic cycle is mediated by actin cytoskeleton? Cytokinesis.
82. Which of the following does not belong to cytoplasmic inclusions? Secretory vesicles.
83. The Zelwegger syndrome is related to biogenesis of which organelle? Peroxisomes.
84. Which of the following statements regarding the structure of biomembranes is true? Biomembranes are supermolecular lipoprotein complexes composed of polar lipids and proteins.
85. The process of apoptosis normally occurs.. During mitotic cell death.
86. Secretory granules are characteristic for.. Exocrine cells.
87. Mitochondrial ATP synthase is involved in..Oxidative Phosphorylation.
88. What is the main function of the intermediate filaments? Structural stability of the cell.
89. Which of the following are non membranous? Microtubules.
90. Which of the following statement about the cell theory is not true? There is no close relationship between cell structure and function.
91. Which of the following is a marker enzyme for lysosomes? Acid phosphatase.
92. Components of the mitotic spindle are, all true except? Actin filaments.
93. Ribosomes can attach to which of the following? Outer nuclear membrane.
94. Which of the following statements is not true? Proteins contain glycerol, fatty acids and ATP.
95. Which of the following structures (centriole) is true? Each centriole is composed of 9 microtubule triplets and 0 in the centre.
96. Which of the following increases surface area necessary for absorption? Microvilli.
97. Which of the following about the plasma membrane is not true? It maintains the negative charge of the cell surface.
98. Free poly-ribosomes synthesize proteins for..Cytosol.
99. Which of the following ions is not present in the cytosol? Hg<sup>2+</sup>.
100. Divisions of tissue stem cells result from direct activity of..DNA molecules.
101. The role of Calcium in muscle contraction is..To bind to troponin and expose actin filaments to myosin heads.
102. How many centrioles are there in non dividing cells? 2.
103. The kinetochore binds to which segment of the chromosome? Centromere.
104. Glycogen granules.. Are responsible for Glucose storage.
105. Which of the following methods uses a beam of electrons? Transmission Electron Microscope.
106. Which cells have plenty of lysosomes? Phagocytes.
107. Molecules involved in the transmembrane transport of small molecules (smaller than 1000) are all true except? Hormone receptors.
108. Which is the range of size of human cells? 5-200mm.
109. What is the normal pathway of migration of proteins through the Golgi Apparatus? Cis golgi --> Olysosomes --> Trans golgi --> Trans golgi: Network.
110. Which of the following is not a function of EPR? Microtubule organiser.
111. Major mitochondrial functions are all true except? Phagocytosis.
112. Which of the following molecules are present in the cytosol? H<sub>2</sub>O.
113. Which of the following molecules are not carbohydrates? Polypeptides.
114. What are the main components of the nucleus? All answers are correct.
115. Cell movement requires.. Microtubules.
116. Cell differentiation includes the following features. All are true except? Apoptosis.

117. Which of the following statements related to the RER is true? It takes part in the metabolism of glycogen.
118. The diameter of actin filament is of..6-8nm.
119. Which of the following statements relating to H&E staining is true? Basophilic structures under H&E stain are not red.
120. Where are intermediate filaments present? In the nucleus and cytosol.
121. The brushborder of erythrocytes represents which structure? Microvilli.
122. The glycocalyx is composed of all, except? Glycolipids.
123. Microtubules are found in the..Microvilli.
124. What is the function of dystropin? It links microfilaments to the plasmalemma.
125. What syndrome is the genetic defect in Dynein linked to? Kartagener syndrome.
126. What is the function of the layer at the bottom (usually pointed with an arrow) of the plasmalemma? Ion transport