BIOLOGY

BOOKS - TRUEMAN BIOLOGY

CELL- THE BASIC UNIT OF LIFE (CELL AND ITS STRUCTURAL ORGANISATION)

Multiple Choice Answer Type

1. An example of enucleated living plant cell is

A. RBC

B. sieve tube cell

C. companion cell

D. xylem parenchyma

Answer: B

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2. Which is not a compartment in the cell ?

A. Nucleus

B. Mitochondria

C. Chloroplast

D. Centriole

Answer: D

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3. Intracellular compartments are not found in cells of

A. lower plants

B. prokaryotes

C. higher plants

D. eukaryotes

Answer: B

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4. Small cells are metabolically active as they have

A. higher nucleocytoplasmic ratio

B. higher surface area per unit volume

C. more cytoplasm

D. both (1) & (2) are correct.

Answer: D

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5. Which of the following represents the correct sequence of relative sizes (in descending order) of the entities named ?

A. Cell, nucleus, water molecule, oxygen atom, chromosome

B. Nucleus, water molecule, cell, chromo-some, oxygen atom

C. Chromosome, cell, nucleus, water molecule, oxygen atom

D. Cell, nucleus, chromosome, water molecule, oxygen atom.

Answer: D

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6. The size of a cell depends upon

A. its oxygen requirements

B. its minerals and materials requirements

C. regulation ability of its nucleus

D. all of the above

Answer: D

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7. Stem cells are

A. permanent cells in plants

B. undifferentiated cells

C. not capatable of division and development

D. all of the above

Answer: B

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8. The prokaryotic cells have

A. one envelope system

B. two envelope system

C. three envelope system

D. no envelope system

Answer: A

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9. Which is absent in RBC ?

A. Aerobic respiration

B. Cytoplasm

C. mRNA

D. Membrane

Answer: A

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10. Largest animal cell is that of

A. Ostrich egg

B. Nerve cell

C. Muscle cell

D. RBC

Answer: A

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11. A multicellular organism is lartger due to

A. large number of cells

B. larger cells

C. smaller cells

D. surface area - volume ratio

Answer: A

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12. Who proposed the omnis cellula - e cullula ?

A. Purkinje

B. Virchow

C. Swammerdam

D. Robert Hooke

Answer: B

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13. Acetabularia (Umbrella plant) is 10 cm long, single celled marine green alga and

A. binucleated

B. multinucleated

C. coenocytic

D. uninucleated

Answer: D

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14. ____ is known as cytoplasm minus all inclusions and organelles.

A. Hyaloplasm

B. Stroma

C. Protoplasm

D. Protoplast

Answer: A

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15. Protoplast lacks

A. neutral

B. nucleus

C. plasma membrane

D. cell wall.

Answer: D

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16. Cytoplasmic streaming is a characteristic of plant cells, Amoeba & WBC. It is caused by

A. sliding microtubules

B. contracting microfilaments

C. change in turgor pressure

D. growth of cell

Answer: B

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17. Cytoplasm is crystallo-colloidal polyphasic solution, discovered bny Kolliker. It is actually

A. Protoplasm

B. Protoplasm - Nucleus

C. Hyaloplasm - Organelle

D. Protoplasm - Organelle

Answer: B

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18. The term protoplasm was coined by

A. Dujardin

B. Purkinje

C. Hugo von Mohl

D. T.H. Huxley

Answer: B

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19. Proteins (export proteins) that are to be used outside the cell are synthesized

A. in mitochondria

B. on SER

C. on RER

D. on free ribosomes

Answer: C

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20. Which organelle helps in the synthesis of lipids, chloesterol, steroids and visual pigments in epithelial cells of retina ?

A. SER

B. RER

C. Golgi bodies

D. Ribosomes

Answer: A

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21. SER mainly consists of

A. cisternae and tubules

B. cisternae and vesicles

C. vesicles only

D. tubules and vesicles

Answer: D

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22. Nissi granules in cyton of nerves are rich in

A. RER

B. Golgi bodies

C. Mitochondria

D. SER

Answer: A

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23. SER is concerned with

A. lysosome

B. protein synthesis

C. sphaerosome

D. all of these

Answer: C

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24. The endoskeleton of cell is made up of

A. ER

B. cytoplasm

C. nucleus

D. ribosomes

Answer: A

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25. Mechanical support, enzyme circulation, protein synthesis and detoxification of durgus are the function of

A. ER

B. ribosomes

C. dictyosomes

D. chloroplast

Answer: A

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26. ER is extensively developed and abundant in

A. liver

B. sperms

C. resting cells

D. all correct

Answer: A

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27. ER has a structure similar to

A. cell wall

B. cell membrane

C. tonoplast

D. mitochondria

Answer: B

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28. The nucleoplasm is continuous with the cytoplasm of a cell through

A. ER

B. Nuclear pores

C. Golgi apparatus

D. Vacuoles

Answer: A

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29. Membrane system considered to be extension of infolded plasma membrane is

A. Golgi complex

B. plastids

C. mitochondria

D. ER

Answer: D

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30. Gastic cells secreting zymogen have well developed

A. SER

B. RER

C. centrioles

D. mitochondria

Answer: B

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31. Choose the correct statement.

A. Ribosomal subunits are united during protein synthesis.

B. Ribosomal subuits always remain united.

C. Ribosomal subunits are united in nucleus during r-RNA synthesis.

D. All are correct statements.

Answer: A

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32. Non membranous cell organelles are

A. mitochondria

B. ribosomes

C. ER and nucleolus

D. ribosomes and centrioles

Answer: D

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33. Site of formation of ribosomal precursor/ribosomal subunits in cell is

A. nucleus

B. nucleolus

C. Golgi body

D. stroma

Answer: B

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34. Ribosomes are attached to ER through

A. rRNA

B. Hydrophobic attraction

C. Ribophorins

D. tRNA

Answer: C

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35. The only organelle found in PPLO is

A. nucleus

B. ribosomes

C. plastids

D. vacuoles

Answer: B

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36. Most proteins to be used within cytosol (cytoplasm) are synthesized on

A. free ribosome

B. bound ribosome

C. Golgi bodies

D. nucleus

Answer: A

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37. Ribosomes differ from cell to cell/species to species in

A. types of membranes

B. types of rRNA

C. Mg^{++} concentration

D. all of these

Answer: B

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38. Which is must for binding of sub units of ribosomes ?

A. Mg^{++}

B. Ca^{++}

C. Fe^{++}

D. Mg and Si

Answer: A

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39. Ribosomes are composed of

A. DNA and protein

B. rRNA and protein

C. Nucleoproteins + Mg^{++} + tRNA

D. DNA, rRNA and proteins

Answer: B

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40. Subunits of prokaryotic ribosomes are

A. 50 S + 50 S

B. 50 S + 30 S

C. 40 S + 30 S

D. 60 S + 40 S

Answer: B

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41. 70 S type of ribosomes found in :-

A. prokaryotic cells

B. eukaryotic cells

C. mitochondria

D. all the above

Answer: D

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42. In eukaryotic cell, the type of ribosomes is

A. 70 S

B. 80 S

C. 70 S & 80 S both

D. none

Answer: C

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43. Which organoid (organelle) is located near the nucleus and contains stack of flattened cisternae (tubular) structures ?

A. Chloroplast

B. Golgi bodies

C. Centrosome

D. Centriole

Answer: B

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44. Golgi bodies contain

A. DNA and RNA

B. Proteins, DNA and lipids

C. Proteins, phospholipids and enzymes

D. Respiratory enzymes and digestive enzymes

Answer: C

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45. In plant cells the number of golgi bodies increases during

A. food synthesis

B. cell division

C. translocation

D. respiration

Answer: B

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46. One of the organelles showing polarity is

A. ribosomes

B. vacoule

C. Golgi bodies

D. lysosomes

Answer: C

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47. Which part of sperm is formed by Golgi bodies ?

A. Middle piece

B. Axial filament

C. Neck

D. Acrosome

Answer: D

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48. Secretory vesicles are pinched off as zymogen granules from ___ side of dictyosomes.

A. convex

B. concave

C. plain

D. all sides

Answer: B

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49. In plant cell, which organelle secrets pectin, hemicellulose, proteins and microfibrils of cellulose to make cell wall ?

A. ER

B. plasma membrane

C. dictyosomes

D. glyoxysomes

Answer: C

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50. Golgi apparatus serves as the centre of

A. proteins production

B. enzyme production

C. β - oxidation of fatty acids

D. carbohydrates metabolism

Answer: D

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51. Unicisternal dictyosomes are found in

A. plant cells

B. fungi

C. bacteria

D. algal cell

Answer: B

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52. Golgi complex takes part in formation of

A. acrosome of sperm

B. cortical granules and vitelline membrane of oocytes

C. yolk in egg

D. all of the above

Answer: D

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53. Which is not under the control of distyosomes ?

A. Autophagy

B. Extracellular secretions

C. Cell plate formation

D. Galactose synthesis

Answer: A

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54. Golgi complex is specialized for

A. energy transduction

B. glycosidation of lipids

C. digestion

D. sphaerosome formation

Answer: B

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55. Protein synthesis can occur in

A. nucleoplasm and cytoplasm

B. mitochondria and chloroplast

C. ribosome and centrosome

D. all of the above

Answer: B

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56. Pyrenoids are centre of

A. fat storage

B. starch storage

C. protein formation

D. enzyme formation

Answer: B

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57. Shape of Spirogyra chloroplast is

A. Spirogyra

B. Chlamydomonas

C. Ulothrix

D. All

Answer: B

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58. Energy transducing organelle is /are

A. Chloroplast

B. mitochondria

C. both of the above

D. none, as no cell is an energy transducer

Answer: C

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59. A piece of carrot and a flower is put in water separately. The water becomes coloured in case of carrot but remains colourless in case in flower. It is because

A. in carrot, Anthocyanin pigments are found in cell sap which are water soluble

B. in flowers, carotenoid pigments are fat soluble and found in chromoplast and do not come out in water.

C. In flowers pigments are found in cytoplasm while in carrot, pigments are localized in vacuoles.

D. (1) and (2)

Answer: D

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60. The cell with in cell, organelle is

A. RER

B. mitochondria

C. both (1) & (2)

D. bacteria

Answer: B

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61. Cell organelles with own genome system and considered to be semiautonomous are

A. chloroplasts and nucleus

B. chloroplast and mitochondria

C. chloroplast

D. chloroplast, centrioles & mitochondria

Answer: B

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62. Biogenesis of chloraplast and mitochondria is

A. de novo

B. from ER/nuclear membrane

C. from preexisting organelle

D. GERL system

Answer: C

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63. The chlorophyll pigments are located in the chloroplast in its

A. membrane part

B. grana region

C. stroma region

D. loculus

Answer: B

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64. Which one is common in nucleus, chloroplast and mitochondria ?

A. 80 S Ribosomes and DNA

B. Circular and nakes DNA

C. Double limiting membrane

D. All of the above

Answer: C

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65. Plastids present in unilluminated cells are

A. Chloroplast

B. chromoplast

C. leucoplast

D. proplastid

Answer: C

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66. Chlorophyll pigments are readily soluble in

A. water

B. acids/alkalies

C. acetone/alcohol

D. all of these

Answer: C

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67. Pigment absent in chromoplast

A. anthocyanin

B. carotene

C. xanthophyll

D. all of the above

Answer: A

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68. Thylakoid are found in the plastids of

A. bacteria

B. blue green algae

C. higher plants

D. all of these

Answer: C

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69. Thylakoids are found in

A. bacteria

B. blue green algae

C. higher plants

D. all of these

Answer: D

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70. Protein synthesis can occur in

A. cytoplasm only

B. cytoplasm, mitochondria and chloroplast

C. ribosome attached on nuclear envelope

D. nucleolus and cytoplasm both

Answer: B

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71. In Mitochondria, Cristae act as sites for

A. protein systhess / translation

B. oxidation - reduction reactions

C. breakdown of molecules

D. phosphorylation of molecules

Answer: B

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72. Animal cells have more mitochondria than plant cells because

A. plant cells need less energy

B. animal cells do not have chloroplast

C. both correct

D. both wrong

Answer: B

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73. Which is absent in Mitochondrial DNA ?

A. Basic Histone Proteins

B. Purines

C. Phosphates

D. All correct

Answer: A

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74. Oxysomes/Elementary particles/$F_0 - F_1$particles are centre of oxidative phosphorylation and found in

A. matrix of mitochondria

B. thylakoids

C. inner menbrane of mitochondria

D. all wrong

Answer: C

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75. Enzyme ATPase is found in ..... of oxysome.

A. F_1

B. F_0

C. $F_1 - F_0$ particle

D. none of the above but in cytoplasm

Answer: A

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76. Enzymes for ETS in mitochondria are located in

A. inner membrane

B. oxysomes

C. outer membrane

D. matrix

Answer: A

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77. which one is absent in human RBC ?

A. Biomembrane

B. Enzymes

C. Hyaloplasm

D. Kreb's cycle

Answer: D

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78. Point out the wrong matching.

A. Mitochondria - Repiration

B. Plastid - Photosyntesis

C. Ribosome - Carbohydrates

D. Cytoplasm - RNA

Answer: C

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79. Which of the following observations most strongly support the view that mitochondria contain transport enzymes aggregated into compact association ?

A. Mitochondria have a property to concentrate in cells which form locomotory structures.

B. Disruption of mitochondria yields membrane fragments which are able to synthesize ATP.

C. Mitochondria have a folded inner membrane.

D. A contractile protein capable of utilizing ATP is obtained from mitochondria

Answer: B

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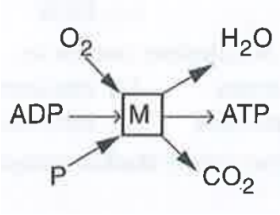
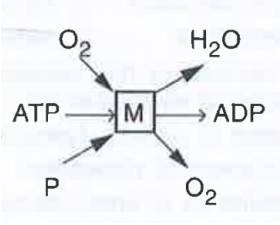
80. Choose the correct functioning of mitochondria.

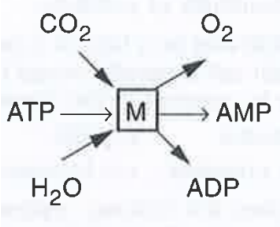
A.

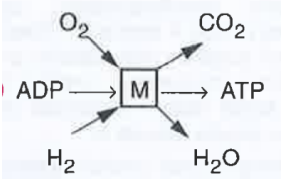


B.



C.



D. 

Answer: A

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81. If a living cell is placed anaerobic condition its

A. mitochondria will multiply

B. mitochondria will disappear

C. ER will disappear

D. mitochondria and ribosomes multiply speedly

Answer: B

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82. Outer and inner membranes of mitochondria are

A. structually and functionally similar

B. structurally different but functionally similar

C. structurally similar but functionally different.

D. Structurally and functionally different.

Answer: D

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83. Antibiodies are produced and secreted by plasma cells. Which of the following organelles must be well developed for effective antibody synthesis?

A. smooth ER

B. mitochondria

C. storage vacuole

D. rough ER

Answer: D

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84. Which organelle can store large amount of calcium ?

A. Lysosomes

B. glyoxysomes

C. Mitochondria

D. Golgi bodies

Answer: C

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85. Which organelle can reduce the number of other organelles ?

A. Oxysome

B. Mitochondrion

C. Lysosome

D. None of these

Answer: C

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86. In granular leucoytes (WBC) like neutrophils the granules are

A. ribosomes

B. polysomes

C. lysozymes

D. lysosomes

Answer: D

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87. Secondary lysosomes should have

A. only enzymes

B. enzymes and food particles

C. food particles only

D. undigested food only

Answer: B

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88. When lysosomes burst, they release their enzymes and digest entire cell. It is called

A. autolysis

B. autophagy

C. endocytosis

D. exocytosis

Answer: A

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89. Which one is incorrect with reference to lysosome ?

A. They are filled with acid hydrolase and other enzymes.

B. They are monomorphic and uniform in structure and function.

C. They may be autophagic.

D. They can digest proteins, nucleic acids, lipids and polysaccharides

Answer: B

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90. In plant cells, peroxisomes are associated with

A. Phototropism

B. Photosynthesis

C. Photorespiration

D. Photoperiodism

Answer: C

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91. Gloxysomes and peroxisomes are

A. microbodies

B. cell inclusions

C. ergastic bodies

D. all of these

Answer: A

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92. Plants can convert fatty acids into sugar by

A. glycolysis

B. glyoxylate cycle

C. Photorespiration

D. krebs'cycle

Answer: B

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93. Malfunctioning of lysosomes results in

A. accumulation of waste materials

B. malignant transformation of cells

C. inborn diseases

D. all of the above.

Answer: D

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94. Which organelle converts cellular polymers into monomers ?

A. Lysosomes

B. Golgi bodies

C. SER

D. Plastids

Answer: A

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95. Lysosomes arise through the

A. Golgi complex

B. SER

C. RER

D. GERL System

Answer: D

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96. Lysosomes are called

A. power house

B. energy transducer

C. disposal units of cell

D. all correct

Answer: C

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97. The organelle present in germinating seeds and connecting with β-oxidation or fat digestion is

A. glyoxysomes `

B. cytosol

C. mitochondria

D. sphaerosomes

Answer: A

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98. Lysosomes are called suicidal bags because they have

A. phagocytic activity

B. hydrolytic enzymes

C. β - oxidation enzymes

D. all of these

Answer: B

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99. Polymorphism is shown by

A. lysosomes

B. glyoxysomes

C. peroxisomes

D. all microbodies

Answer: A

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

A. Endosperm of wheat

B. Endosperm of castor

C. Palisade cells in leaf

D. Root hairs

Answer: B

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101. Plant lysosomes rich in fats and taking part in synthesis of fats, are

A. spherosomes

B. glyoxysomes

C. microsomes

D. lysosomes

Answer: A

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102. Organelles having enzymes involved in photorespiration are

A. mitochondria, chloroplast & peroxisomes

B. mitochondria, nucleus and ribosomes

C. mitochondria, glyoxysomes and peroxisomes

D. mitochondria , chloroplast & glyoxysomes

Answer: A

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103. In the process of metamorphosis of amphibians, the embryonic tissues are digested by

A. golgi apparatus

B. residual bodies

C. lysosomes

D. peroxisomes

Answer: C

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104. Peroxisomes are found in

A. plant cells

B. animal cells

C. both (1) & (2)

D. bacteria

Answer: C

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105. Which of the following stores calcium required for muscle contraction ?

A. Smooth ER

B. Microfilaments

C. GB

D. RER

Answer: A

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106. The glycolate metabolisam occur in

A. lysosomes

B. ribosomes

C. glyoxysomes

D. peroxisome

Answer: D

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107. The enzyme called Marker enzyme in lysome is

A. acid phosphatase

B. peroxidase

C. hyaluronidase

D. catalase

Answer: A

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108. Electron microscopy has revealed that the Golgi complex is involved in the

A. formation of primary lysosomes

B. development of ribosomes

C. accumulation of lipoproteins

D. accumulation of proteins

Answer: A

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109. An individuals was on a fast for a long period of time. Which cell organelle would be the most likely one to respond to the distress signal ?

A. Nucleolus

B. ER

C. Golgi complex

D. Lysosome

Answer: D

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110. Microtubules are hollow, cylindrical, non contractile membraneless, cytoskeletal structure of 250 Å diameter. These are composed of sulphur rich tubulin protein and arise from nucleating centres like kietochore, basal body, massules of centrioles etc. This tubulin occurs in

A. 11 longitudinal protofilaments

B. 13 protofilaments

C. 2 + 9 protofilaments

D. 0+ 9 protofilaments

Answer: B

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111. Microtubules help in

A. cilia, flagella, centrioles, spindle aparatus formation/cell division

B. chromosomal fibres, nerve processes, endocytosis

C. cell motility and cell shape, muscle contraction

D. all the above are correct

Answer: A

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112. Filaments present in flagella/Cilia are

A. microtubules

B. microfilaments

C. microfibrils

D. microvilli

Answer: A

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113. Sweeping type of rhythmic movements are shown by

A. flagella

B. cilia

C. both (1) & (2)

D. centrosome

Answer: B

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114. Which is not an intracellular compartment in the cell ?

A. Nucleus

B. Centriole

C. Mitochondria

D. Chloroplast

Answer: B

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115. 0 + 9 microfibrillar structure is found in

A. shaft of flagella

B. shaft of cilia

C. centriole

D. all correct

Answer: C

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116. Which form cell wall and spindle ?

A. Golgi

B. ER

C. Microfilaments

D. Microtubules

Answer: D

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117. Cytoplasmic streaming and function of microvilli depend on

A. microtubules

B. microfilaments

C. centriole

D. all of these

Answer: B

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118. Tubulin protein occurs in

A. enzymes

B. RER

C. microtubules and cilia

D. microfilaments and microvilli

Answer: C

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119. Centrosome is

A. a nuclear structure of animal cell

B. cytoplasmic structure of only animal cells

C. cytoplasmic structure of both plant and animal cells

D. cytoplasmic structure of plant cells

Answer: b

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120. Microfilaments were discovered by Paleviz et al, 1974. These are formed of

A. actin

B. tubulin

C. myoglobin

D. myosin

Answer: A

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121. Microtubules are found in

A. bacteria

B. eukaryotic cells

C. prokaryotic cells

D. microvilli

Answer: B

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122. Arrangement of microtubules in basal bodies is

A. 9 pairs in circle

B. 9 triplets in circle

C. 9 pairs in circle + 2 axial

D. 2 in circle and 9 in periphery

Answer: B

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123. An organelle that has no DNA but capable of duplication is

A. centriole

B. centrosphere

C. centromere

D. kinetochore

Answer: A

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124. In Amoeba which controls the cytoplasmic osmolality ?

A. Nucleus

B. Ectoplasm

C. Microtubules

D. Contractile vacuole

Answer: D

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125. When an Amoeba is taken from river to sea water, than

A. contractile vacuole disappears

B. feeding stops

C. it divides immediately

D. undergoes encystment

Answer: A

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126. A large and mature plant cell has

A. many vacuole

B. no vacuole

C. a large vacuole

D. many small vacuoles & a large vacuole

Answer: C

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127. Cells of aleurone layer contain

A. fats

B. starch

C. proteins

D. sugars

Answer: C

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128. The layer of vacuole is

A. plasmalemma

B. tonoplast

C. sarcolemma

D. cytoplasmic membrane

Answer: B

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129. Contractile vacuoles help in

A. excretion

B. osmoregulation

C. osmoregulation and respiration

D. digestion

Answer: B

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130. The anthocyanin pigments responsible for colour of petals are

A. water soluble and located in cell sap

B. water soluble and located in chloroplast

C. water soluble and located in chromoplast

D. water insoluble and located in cell sap

Answer: A

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131. At maturity which of the following is enucleate ?

A. Sieve cell

B. Companion cell

C. Palisade cell

D. Cortical cell

Answer: A

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132. Nucleus was discovered in root cells of orchids by

A. Robert Brown

B. Robert Hooke

C. Straburger

D. Bowman

Answer: A

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133. Nucleus is the site of

A. m-RNA systhesis

B. assemblage of ribosomal units

C. both (1) & (2)

D. DNA and protein synthesis

Answer: B

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134. Below are given a few cell organelles :

(a) Nucleus

(b) Lysosomes

(c) Peroxisomes

(d) ER

(e) Mitochondria

(f) Centrioles

(g) Plastids

Select the correct choice of organelles not bounded by two lipoprotein membranes.

A. b, c, d, f

B. a, e, f

C. d, a , e , g

D. b, c, f

Answer: A

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135. Chromosomes at anaphase are of various shapes depending upon position of centromere. It is J shaped when centromere is

A. middle

B. top

C. subterminal

D. near centre

Answer: C

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136. Which of the following structures has single membrane ?

A. Nucleus

B. Centriole

C. Nucleous

D. None of these

Answer: D

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137. Nucleoli are not found in

A. Blue green algae

B. Maize

C. Pancreas

D. Fungi

Answer: A

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138. Metacentric chromosomes have

A. no arms

B. equal arms

C. unequal arms

D. one arm

Answer: B

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139. L- shaped chromosomes are termed :

A. telecentric

B. submetacentric

C. sex chromosome

D. acrocentric

Answer: B

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140. Centrmere is required for

A. DNA duplication

B. cytoplasmic cleavage

C. chromosome segregation

D. poleward movement of chromatids

Answer: C

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141. Coiled dense, deep stain portions of chromosomes are designated as

A. pellicle

B. heterochromatin

C. euchromatin

D. heterochromosomes

Answer: B

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142. Chromosomes are best observed at metphase. For studying the shape, best stage is

A. early prophase

B. anaphase

C. telophase

D. late prophase

Answer: B

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143. Nuclear membrane is derived from

A. ER

B. plasma membrane

C. membrane of mitochondria

D. nucleoplasm

Answer: A

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144. Nucleoproteins are synthesized by

A. SER

B. nucleplasm

C. nucleolus

D. r-RNA

Answer: C

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145. The eukaryotic cells are essentially two envelope system because they contain

A. cell wall and plasma membrane

B. plasma membrane and nuclear membrane

C. plasma membrane and thylakoid

D. double membrane bound cell organelles

Answer: B

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146. Which of the following statements justifies that " the cell is a self-contained unit" ?

A. It independently carries out all fundamental biological processes.

B. It oxidises food molecules to produce energy and utilises this energy to synthesise complex molecules.

C. Reproduces with similar herediatary properties.

D. All of the above

Answer: D

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147. Functionally like prokaryotes but otherwise found in eukaryotes in

A. muscle cell

B. erythrocyte

C. PPLO

D. thrombocyte

Answer: B

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148. The ER acts as a circulatory or transporting system. Choose the correct path of transport of substances.

A. Lysosome $\rightarrow$ Golgi-membrane $\rightarrow$ Agranular ER $\rightarrow$ Granular ER

B. Granular ER $\rightarrow$ Golgi membrane $\rightarrow$ Lysosomes

C. Golgi membrane $\rightarrow$ Lysosomes $\rightarrow$ Granular ER $\rightarrow$ Golgi-membrane

D. Agranular ER $\rightarrow$ Lysosome $\rightarrow$ Granular ER $\rightarrow$ Golgi - membrane

Answer: B

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149. Which of the following is related to glycosidation of lipids and glycosylation of protein ?

A. Golgi body

B. Mitochondria

C. Lysosome

D. Peroxisome

Answer: A

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150. The membrane of endoplasmic reticulum remains continuous with membrane of

A. plasma membrane and lysosome

B. Golgi-complex and plastids

C. plasma -membrane and ER

D. plasma - membrane and nuclear membrane

Answer: D

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151. Cytoskeleton of cell is made up of

A. Lysosome & vacoules & ribiosomes

B. microtubules

C. microfilaments and microtubules

D. all of the above

Answer: C

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152. The larger and smaller subunits in 80 S ribosome are

A. 50 S, 30 S

B. 60 S, 40 S

C. 40 S, 60 S

D. 30 S, 50 S

Answer: B

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153. The functional unit in the synthesis of protein is

A. peroxisome

B. dictyosome

C. microsome

D. polysome

Answer: D

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154. A cell organelle common in Protista and Monera is

A. Vacuole

B. Chloroplast

C. Lysosome

D. Ribosome

Answer: D

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155. Which of the following is not a function Golgi complex ?

A. Biosynthesis of polysaccharides

B. Packaging of proteins

C. Differentiation of cellular membrances

D. Synthesis of fatty acids

Answer: D

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156. Enzymes of citric acid or Krebs cycle occur in

A. on inner mitochondrial membrane

B. in the matrix

C. on outer mitochondrial membrane

D. none of these

Answer: B

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157. Mitochondria are non-existent in

A. red algae

B. bacteria

C. green algae

D. all of these

Answer: B

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158. The endosymbiotic theory is concerned with

A. orgin of lichens

B. origin of eukaryotes

C. origin of chloroplast and mitochondria

D. origin of viruses

Answer: C

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159. Chloroplasts are engaged in

A. photosynthesis

B. proteins synthesis

C. photosynthesis and coding of structural proteins for thylakoid membrane

D. photosynthesis and detoxification

Answer: C

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160. The thylakoid membrane contains

A. oxysomes

B. structurally distinct photosystems

C. both (1) & (2)

D. enzymes of dark reaction

Answer: B

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161. Which of the following has/have lysosomes activities in plant cells ?

A. Spherosomes

B. Glyxysomes

C. Ribosomes

D. All of these

Answer: A

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162. Glyxysome helps in

A. amino acid metabolism

B. photorespiration

C. beta-oxidation/digestion of fats

D. all of the above

Answer: C

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163. When a lysosome fuses with a phagosomes/food, it result in the formation of

A. primary lysosomes

B. residual body

C. autophagic vacuole

D. secondary lysosome

Answer: D

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164. Demolition squad of the cell is

A. dictysosome

B. RER

C. glyoxysomes

D. lysosome

Answer: D

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165. A close relationship between ER, lysosome and dictyosomes is denoted as

A. vacuolar sytem

B. GERL

C. annulate lamellae

D. internal mileu

Answer: B

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

" " Or

Site of gluconeogenesis is

A. liposomes

B. Golgi bodies

C. microsomes

D. glyoxysomes

Answer: D

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167. During starvation, energy is supplied by

A. lysosomes

B. centrosomes

C. vacuoles

D. chromoplast

Answer: A

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168. Myofibrils are

A. microfilaments

B. microtubules

C. myoglobin

D. ER

Answer: A

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169. In fruits and flowers, colour pigments are located in

A. cytoplasm

B. vacuole

C. mesophyll

D. cell membrane

Answer: B

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170. Water balance of cell is maintained by

A. ER

B. vacuoles

C. lysosomes

D. all of these

Answer: B

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171. The cell structures that are mainly nucleoproteinaceous in nature, usually have

A. single membrane

B. double membrane

C. no membrane

D. any of these

Answer: C

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172. The polynucleate cells of animals and plants are known as

A. syncitial cells and coenocytes respectively

B. coenocytes are syncitial cells respectively

C. coenocytes

D. poly cells

Answer: A

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173. Cell wall is

A. living and impermeable

B. permeable, dead with pits

C. dead permeable without pits

D. living semipermeable with pits

Answer: B

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174. The cemanting layer of pectin between adjacent plant cell is called.

A. middle lamella

B. secondary wall

C. ectoplast

D. primary wall

Answer: A

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175. The protoplasmic strands connecting the two adjacent plants cells through which exchange of material occur are celled.

A. plasmalemma

B. plasmodesmata

C. tonofibrils

D. spindle fibres

Answer: B

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176. During the formation of cell wall the first formed layer of cellulose secreted by Golgi bodies is

A. middle lamella

B. Primary wall

C. Tertiary wall

D. S_1 layer of secondary wall

Answer: B

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177. A cell lacking cell wall would also lack

A. Chloroplast

B. ER

C. mitochondria

D. biomembrane

Answer: A

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178. Which of one provides hardness to cell wall ?

A. Chloroplast

B. S_1 layer of secondary wall

C. Tertiary wall

D. Primary wall

Answer: D

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179. Which one provides hardness to cell wall?

A. Cellulose

B. Suberin

C. Lignin

D. Cutin

Answer: C

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180. The secondary wall is chiefly composed of

A. lignin

B. pectin

C. murein

D. chitin

Answer: A

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181. Middle lamella is made up of

A. cellulose

B. protein

C. calcium and magnesium pectate

D. lipids and lignin

Answer: C

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182. Middle lamella is found between _____of adjacent cells.

A. secondary walls

B. Primary wall

C. plasmalemma

D. anywhere in cell

Answer: B

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183. Which layer of cell wall is found outside cell membrane ?

A. Primary wall

B. secondary wall

C. Tonoplast

D. Tertiary wall

Answer: D

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184. Cell wall consists of

A. water, hemicellulose and cellulose+ pectin

B. cellulose , liqids and proteins

C. cellulose + proteins + petin + water + lipids and hemicellulose

D. microfibrils and pectin

Answer: C

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185. The fatty chemical substance in cork cell wall is

A. lignin

B. chitin

C. cutin

D. suberin

Answer: D

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186. Which layer has more cellulose ?

A. Primary wall

B. Secondary wall

C. Cell membrance

D. Middle lamella

Answer: B

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187. Membrane proteins are

A. cellulase

B. lyases

C. permeases

D. All of these

Answer: C

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188. Unthickened area in secondary wall is called

A. stome

B. torus

C. pit

D. plasmodesma

Answer: C

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189. Pit membrane is actually

A. primary walll

B. tertiary wall

C. secondary wall

D. cell membrance

Answer: A

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190. A pit is unthickened area is call wall. It lacks

A. primary wall

B. middle Lamella

C. secondary wall

D. cell wall and cell membrance

Answer: C

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191. A phospholipid molecule is amphipathic and produce two layers coming in contact with H_2O. The head of phospholipid molecule is

A. at the periphery

B. towards the centre

C. at the angle of 40°

D. embendded in protein molecules

Answer: A

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192. Carbohydrate molecules attached to lipid and protein molecules from Glycocalyx (ex-traneous coat). These carbohydrates are usually

A. monosaccarides

B. polysaccharides

C. oligosaccharides

D. starches

Answer: C

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193. Fluid mosaic model for the structures of plasma membrane explains

A. a single lipid layer in between 2 protein layers

B. a layer of proteins on one sides and a bilayer lipid on other side

C. 2 lipid layers and 1 protein Layer

D. a middle phospholipid bilayer with proteins both inside and on outer side of lipids bilayer

Answer: D

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194. Cell recognition and adhesion are facilitated by components of plasma membrane. These components are generally

A. lipids

B. proteins

C. both (1) & (2)

D. glycolipids and glycoproteins

Answer: C

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195. Biomembrance are

A. asymmetric and solid sheet like

B. symmetric and globular

C. asymmetric and fludiy

D. symmetric and fluidy

Answer: c

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196. Lipid molecules (Phospholipids) are amphiatic. Each moleucle has

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197. Beet root if kept in cold water anthocyanin does not come out due to plasma membrane

A. dead

B. impermeable to anthocyanin

C. permeable to anthocyanin

D. differential permeable

Answer: C

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198. Frmae work molecules in biomembranes are

A. glycolipids

B. phospholipids

C. glycoproteins

D. oligosaccharides

Answer: C

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199. In cell membrane which molecules show flip flop diffusion

A. carbohydrate (glycocalyx)

B. lipid

C. protein

D. all of the above

Answer: B

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200. An Amoeba survives in a hypotonic solution that destroys a human RBC. It is due to

A. membrane permeability of Amoeba is much more than the membrane of a RBC.

B. Amoeba has water expelling contractile vacuoles

C. both (1) and (2) are correct

D. amoeba has a rigid wall

Answer: C

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201. The plasmalemma allows the passage of liquids engulfed in vesicles and passed on to the cytoplasmic vacuoles. This process of bulk drinking is called

A. phagocytosis

B. reverse pinocytosis

C. exocytosis

D. pinocytosis

Answer: D

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202. Lipid bilayers in biomembranes are barrier to

A. polar molecules

B. non polar molecules

C. both polar and non polar molecules

D. none

Answer: A

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203. The fluid mosaic model explains

A. structural aspects of cell membrane

B. functional aspects of cell membrane

C. structural and functional aspects both

D. none of the above

Answer: C

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204. Fluidity/flexibiliy of a cell membrane is due to are

A. lipids

B. proteins

C. water

D. oligosaccharides

Answer: A

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205. Transmembrane proteins in cell membrane are

A. intrinsic proteins

B. extrinsic proteins

C. glycocalyx

D. tunnel proteins

Answer: D

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206. The functional characteristics of a Plasma membrane in fluid mosaic model are determined by

A. extrinsic proteins

B. intrinsic proteins

C. both (1) & (2)

D. lipid molecules

Answer: C

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207. The channels and pumps that control molecular traffic in and out of a cells are collectively known as

A. intrinsic proteins

B. permeases

C. receptors

D. cytochromes

Answer: B

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208. A membrane is held together primarily by

A. hydrophobic attractions

B. hydrophilic attractions

C. covalent bonds

D. ionic bonds

Answer: A

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209. Absorptive cells on free surface bear

A. flagella

B. microvilli

C. desmosomes

D. pseudopodia

Answer: B

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210. Carbohydrates in cell membrane participate in

A. transportation of materials

B. cell to cell recognition

C. catalysing reactions

D. all of the above

Answer: B

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211. Cell membrane has proteins, lipids and carbohydrates. With respect to their mutual proportions, which statement is correct ?

A. All the three are in equal proportion

B. Lipids are in least proportions

C. Carbohydrates are in least proportions.

D. Proteins are in least amount

Answer: C

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212. Purple cabbage leaves do not loose their colour in cold water but do so in boiling water because

A. boiling water enters the cell easily

B. plasmalemma is killed in boiling water

C. pigment is not soluble in cold water

D. cell wall is coagulated in boiling water

Answer: B

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213. Plasmalemma of two adjacent cells are fussed in case of

A. terminal bars

B. tight junctions

C. microvilli

D. desmosomes

Answer: B

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214. Intercellular junction in animal cell is

A. middle lamella

B. desmosome

C. plasmodesmata

D. glycocalyx

Answer: B

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215. Poisons like cyanide inhibit Na^+ influx during cellular transport. This inhibitory effect is reversed by an injection of ATP. This demonstrates that

A. $Na^+ - K^+$ pump operates fully in cells

B. ATP is hydrolysed by ATPase to release energy

C. Energy for $Na^+ - K^+$ pump comes from ATP hydrolysis

D. ATP is a carrier protein

Answer: C

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216. Protein icebergs in a sea of lipids means

A. units membrane model

B. fluid mosaic model

C. lamellar / sandwich model

D. micellar model

Answer: B

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217. Microfibrils are related to

A. Cellulose

B. chloroplast

C. SER

D. Phospholipids

Answer: A

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218. The overarching secondary wall which encloses a part of the pit cavity is called

A. pit border

B. pit membrane

C. pit aperture

D. pit canal

Answer: A

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219. Lignin is the important constituent in the cell wall of

A. cambium

B. parenchyma

C. phloem

D. xylem parenchyma

Answer: D

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220. Plasma membrane is derived from

A. Golgi bodies

B. peroxisome

C. nucleus

D. mitochondria

Answer: A

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221. Desmosomes possess

A. desmotubules

B. intercellular cementing material

C. myofibrils

D. all of the above

Answer: B

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222. Which is wrong ?

A. Cell junctions are found in animal cells only

B. Cell junctions are absent in plant cells

C. Plasmodesmata are cytoplasmic connections in plant cells

D. Cell junctions and plasmodesmata are found in plant and animal cells respectively

Answer: D

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223. Membrances fluidly

A. decreases with rise in temperature

B. decreases with lowering of temperature

C. increases with lowering of temperature

D. no effect observed w.r.t. temperature

Answer: B

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224. One of the following methods of transporation does not involve a change in extrinsic and intrinsic proteins ?

A. Active transport

B. Simple diffusion

C. Facilitated diffusion

D. Both (2) & (3)

Answer: B

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225. Desmosomes are concerned with

A. cytolysis

B. cellular excretion

C. cell division

D. cell adherence

Answer: D

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226. Trans proteins of the plasma membrane are often also called

A. tunnel proteins

B. surface proteins

C. globular proteins

D. extrinsic proteins

Answer: A

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227. Plasmodesmata are junctions between plant cells. These involve modification of

A. plasma membrane

B. cell wall

C. plasma membrane as well as cell wall

D. intercellular material

Answer: C

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228. Flagella of prokaryotic and eukaryotic cells differ in

A. location in cell and mode of functioning

B. type of movement and placement in cell.

C. microtubular organization and functioning

D. microtubular organization and type of movement

Answer: D

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229. Read the statements given below with regard to the function performed by Golgi apparatus

I. Transport and chemically modify the material contained within it.

II. Stores and synthesizes fats.

III. Secrets slime in the insectivorous plants

Which of the following is the correct answer ?

A. I is wrong but II and III are correct

B. II wrong but I and III are correct

C. II and III are wrong but I is corrrect

D. All are correct

Answer: B

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230. Which one is not properly paired

A. Golgi apparatus – Breaking of complex macromolecules

B. Endoplasmic reticulum – Protein synthesis

C. Chloroplast – Photosynthesis

D. Mitochondria – Oxidative phosphorylation

Answer: A

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231. Which group of organelles is involved in synthesis of substances needed by cell ?

A. Lysosome, vacuole, golgi body

B. Ribosome, rough ER, smooth ER

C. Rough ER, microtubule, ribosome

D. Smooth ER, lysosome, vacuole

Answer: B

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232. Lysosomes are never involved in

A. Autophagy

B. Extracellular digestion

C. Intracellular digestion

D. Synthesis of lysosomal enzymes

Answer: D

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233. Match List -I with List - II and select the correct answer using the codes given below the lists

	List- I		List-II
$A.$	Dictyosomes	1.	Storage
$B.$	Glycocalyx	2.	Symplast
$C.$	Vacuoles	3.	Transport
$D.$	Plasmodesmata	4.	secretion
		5.	Histocompatibility

A.

A	B	C	D
4	5	1	2

B.

A	B	C	D
3	4	2	1

C.

A	B	C	D
4	5	3	2

D.

A	B	C	D
4	3	1	2

Answer: A

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234. Match list -I (Function of proteins of cytoskeleton) with list - II (Proteins involved in the given functions) and select the correct answer using the codes given below the lists.

List-I (Function of Proteins of cytoskeleton)	List-II (Proteins involved in the Given Functions)
A. Contraction of micro filaments.	1. Peroxisomes
B. Inhibition of poly-merization of microtubules.	2. Actin
C. Breakdown of xenobiotics	3. Dynein
D. Movement of cilia and flagella.	4. Colchicine

A.

A	B	C	D
2	4	1	3

B. $\begin{matrix} A & B & C & D \\ 2 & 4 & 3 & 1 \end{matrix}$

C. $\begin{matrix} A & B & C & D \\ 4 & 2 & 1 & 3 \end{matrix}$

D. $\begin{matrix} A & B & C & D \\ 4 & 2 & 3 & 1 \end{matrix}$

Answer: A

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235. Which of the following statements best describes the functional characteristics of lysosomes ?

A. They function at alkaline pH

B. They function only within the intracellular compartment

C. They contain enzymes that lack macro molecular specificity

D. Provide nourishment during starvation

Answer: D

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236. Which of the following would be expected to contain the most peroxisomes ?

A. Heart

B. Stomach

C. Liver

D. Pancreas

Answer: C

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237. Which is correctly matched ?

A. $\text{Ribosome} - \text{Photosynthesis}$

B. Centrosome – Enzymes of digestion

C. Lysosomes – Synthesis of amino acids

D. ER – Formation of new nuclear membrane

Answer: D

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238. Go through the following statements :

(i) Lysosomes contain hydrolytic enzymes which are optimally active at the alka line pH.

(ii) A number of proteins synthesised by ribosomes on the endoplasmic reticulum are modified in the cisternae of the Golgi apparatus before they are released from its cis face.

(iii) Typically a mitochondrion has a diameter of 0.2-1.0 μm and length of 1.0 - 4.1 μm

(iv) Elaioplasts store oils and fats.

Find out the correct statements

A. (i), (ii) & (iv)

B. (iii) & (iv)

C. (ii), (iii) & (iv)

D. All are correct

Answer: B

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239. Go through the following statements

(i) In human beings, the membrane of the erythrocyte has approximately 52 percent lipids and 40 percent proteins

(ii) Lipids are arranged within the membrane with the hydrophobic tails towards the outer side and the polar head towards the inner side.

(iii) As the polar molecules cannot pass through the non- polar lipid bilayer, they require a carrier protein of the membrane to facilitate their transport across the membrane

(iv) The endomembrane system includes endoplasmic reticulum, Golgi complex, lysosomes and peroxisomes

Find out the wrong peroxisomes :

A. (i), (ii) & (iii)

B. (ii) & (iii)

C. (ii), (iii) & (iv)

D. (i), (ii) & (iv)

Answer: D

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240. Match the structures in List - I with the functions in List - II selet the correct answer using the codes given below the lists

	List - I		List-II
A	Nucleolus	1.	Lipid storage
$B.$	Spherosomes	2.	$\beta -$ oxidation of fatty acids
$C.$	Glyoxysome	3.	Transport of macromolecules
$D.$	Plasmodesmata	4.	RNA-synthesis

A. $\begin{matrix} A & B & C & D \\ 4 & 1 & 3 & 2 \end{matrix}$

B. $\begin{matrix} A & B & C & D \\ 1 & 2 & 4 & 3 \end{matrix}$

C. $\begin{matrix} A & B & C & D \\ 4 & 1 & 2 & 3 \end{matrix}$

D. $\begin{matrix} A & B & C & D \\ 1 & 3 & 2 & 4 \end{matrix}$

Answer: C

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241. Which of the following sets of characters represent that of eukaryotic cytosolic ribosomes ?

A. 80 S (30S, 60 S), (16S r -RNA, 23S , r-RNA and 5S r-RNA

B. 70 S (30S, 50 S), (16S r - RNA, 23S, r-RNA and 5S r -RNA

C. 80S(40 S, 60 S), (18S r-RNA, 28 S, r - RNA, 5.8S r - RNA and 5S r - RNA

D. 70 S (40S, 50 S), (18S r-RNA, 28S, r-RNA, 58S r - RNA and 5S r-RNA)

Answer: C

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242. Consider the following processes

(i) Breakdown of extra-cellular materials by releasing enzymes into the surrounding medium.

(ii) Providing nourishment during starvation.

(iii) Help during remodelling of the bone.

(iv) Massive production of membrane glycoproteins, ribophorins -I and II for the stabilization of lysosomal investment.

Which of the above is/are function (s) of lysosomes ?

A. (i) only

B. (i), (ii) and (iv)

C. (i), (ii) and (iii)`

D. (ii), (iii) and (iv)

Answer: C

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243. The correct order of increase in the size of the structures listed below is

(i) Proteins

(ii) Plant cell

(iii) Mitochondria

(iv) Ribosomes

A. (i), (iv), (iii), (ii)

B. (ii), (i), (iii) or (iv)

C. (ii), (iii), (i), (iv)

D. (iii), (ii), (i), (iv)

Answer: A

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244. Chloramphenicol, an inhibitor of protein synthesis, would inhibit protein synthesis in mitochondria but would not do so with regard to protein synthesis in the cytoplasm. This suggests that

A. The mitochondria protein synthesis and the cytoplasmic protein synthesis are of different types

B. The enzymes machinery of protein synthesis in mitochondria function independently

C. The mitochondria are dependent upon nucleus for its protein synthesis

D. Both 'b' and 'c'

Answer: B

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245. Chloroplasts

A. Are found in all plant cells

B. Have chlorophyll as their only pigment

C. Do not contain any DNA and rely totally on the genes in the nucleus for the coding of their required proteins

D. Are involved in the synthesis of sugar

Answer: D

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246. Three of the following statements regarding cell organelles are correct while one is wrong. Which one is wrong.

A. Endoplasmic reticulum consists of a network of membranous tubules and helps in transport, synthesis and secretion.

B. Leucoplasts are bound by two membranes, lack pigment but contain their own DNA and protein synthesizing machinery.

C. Sphaerosomes are sinble membrane bound and as associated with synthesis and storage of lipids.

D. Lysosomes are single membranes vecicles budded off from ER and contain oxidative enzymes

Answer: D

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247. The true statement about ribosomes is `

A. Attached ribosomes synthesise proteins mainly for use inside the cell.

B. Attached ribosomes are 70 S

C. 16S rRNA is absent in 80 S ribosomes

D. All of the above

Answer: C

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248. Among the following, the molecule that would experience least resistance for entering a cell would be

A. NaCl

B. Glucose

C. Fatty acid

D. Amino acid

Answer: C

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249. Which group of organelles is involved in anabolic processes in a cell ?

A. Lysosome, vacuole, ribosome

B. Ribosome, rough ER, smooth ER

C. Vacuole, rough ER, smooth ER

D. Smooth ER, ribosome, vacuole

Answer: B

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250. Hydrolases may accidentally leak out of the lysosomes but are unlikely to damage any of the internal cellular structures because

A. the cytoplasm contains several coenzymes that inhibit hydrolases from functioning.

B. hydrolases are only active at an acidic (pH 5.5) pH.

C. peroxisomes and other organelles absorb free hydrolases

D. cells rapidly expel all hydrolases via exocytosis

Answer: B

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251. Which one of the following pairs is not correctly matched ?

A. ER 1. Microbodies

B. Peroxisome 2. Photorespiration

C. Golgi complex 3. Protein synthesis

D. Microtubular organelles 4. Locomotion

Answer: C

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252. You would expect a cell with an extensive Golgi apparatus to

A. move actively

B. make a lot of ATP

C. secrete a lot of material

D. store a large quantity of food

Answer: C

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253. Mitochondria come in a variety of shapes and sizes and are accurately described by all of the following statements EXCEPT

A. It is an organelle with a double membrane

B. Mitochondria do not rely on the nuclear mRNA for protein synthesis

C. Mitochondria possess infoldings known as cristae

D. Usually mitochondria are shaped like rods

Answer: B

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254. All of the following statements apply to microtubules EXCEPT

A. They are able to move vesicles and other storage inclusions

B. They serve a cytoskeletal area

C. They are linear polymers of tubulin

D. They make up the thin myofilament (actin) in skeletal muscle

Answer: D

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255. Which of the following statements regarding mitochondrial membrane is NOT correct ?

A. The inner membrane is highly convoluted forming a series of infoldings

B. The outer membrane resembles a sieve

C. The outer membrane is permeable to all kinds of molecules

D. The enzymes of the electron transfer chain are embedded in the outer membrane

Answer: D

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256. Select the wrong statement from the following

A. both chloroplasts and mitochondria contain DNA.

B. the chloroplasts are generally much larger than mitochondria

C. both chloroplasts and mitochondria contain an inner and an outer membrane

D. both chloroplasts and mitochondria have an internal compartment, the thylakoid space bounded by the thylakoid membrane

Answer: D

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257. Which one of the following is not a constituent of cell membrane

A. Proline

B. Phospholipids

C. Cholesterol

D. Glycolipids

Answer: A

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258. Plasmodesmata are

A. membrane connecting the nucleus with plasmalemma

B. connections between adjacent cells

C. lignified cemented adjecent cells

D. locomotary structures

Answer: B

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259. Cytoskeleton is made up of

A. cellulosic microfibrils

B. proteinaceous filaments

C. calcium carbonate granules

D. callose deposits

Answer: B

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260. Middle lamella is composed mainly of :

A. calcium pactate

B. phosphoglycerides

C. hemicellulose

D. muramic acid

Answer: A

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261. Chloroplast stroma of higher plants contains

A. ribosomes

B. chlorophyll

C. light-independent reaction enzymes

D. light - dependent reaction enzymes

Answer: C

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262. There is no DNA in

A. a mature spermatozoan

B. hair root

C. an enucleated ovum

D. mature RBCs

Answer: D

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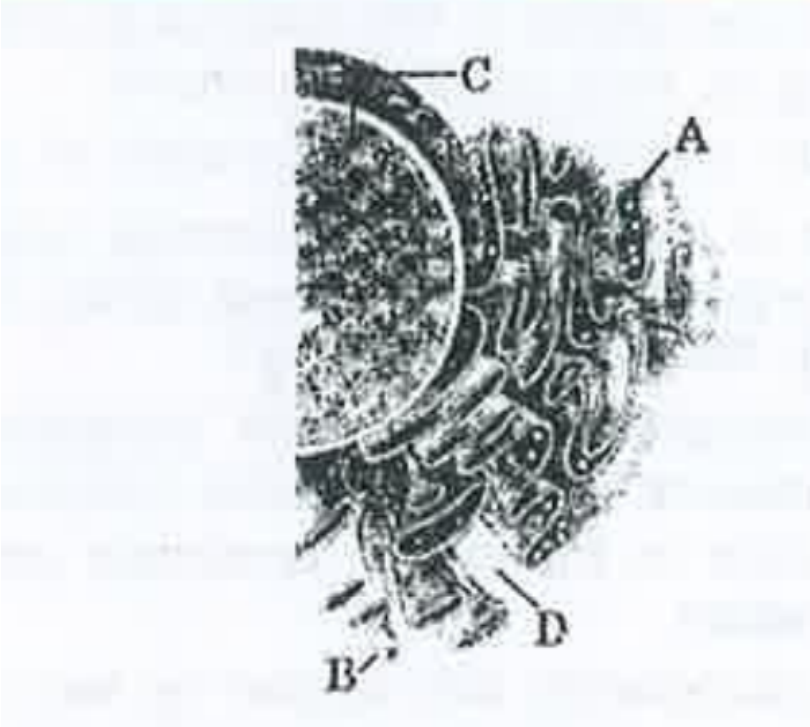
263. Identify the components labelled A, B, C and D in the diagram below from the list (i) to (viii) given along with



Components :

(i) Cristae of mitochondria

(ii) Inner membrane of mitochondria

(iii) Cytoplasm

(iv) Smooth endoplasmic reticulum

(v) Rough endoplasmic reticulum

(vi) Mitochondrial matrix

(vii) Cell vacuole

(viii) Nucleus

The correct components are

A. $\begin{matrix} A & B & C & D \\ (v) & (iv) & (viii) & (iii) \end{matrix}$

B. $\begin{matrix} A & B & C & D \\ (i) & (iv) & (viii) & (vi) \end{matrix}$

C. $\begin{matrix} A & B & C & D \\ (vi) & (v) & (iv) & (vii) \end{matrix}$

D. $\begin{matrix} A & B & C & D \\ (v) & (i) & (iii) & (ii) \end{matrix}$

Answer: A

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

A. Thylakoid

B. Endoplasmic Reticulum

C. Plamalemma

D. Cytoskeleton

Answer: D

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265. The plasma membrane consists mainly of

A. proteins embedded in carbohydrate bilayer

B. phospholipids embedded in a protein bilayer

C. proteins embedded in a phospholipids bilayer

D. proteins embedded in a polymer of glucose molecules

Answer: C

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266. Which one of the following structures between two adjacent cells is an effective transport pathway ?

A. Plasmalemma

B. Plasmodesmata

C. Plastoquiones

D. Endoplasmic reticulum

Answer: B

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267. Which one of the following has its own DNA ?

A. Peroxisome

B. Mitochondria

C. Dictyosome

D. Lysosome

Answer: B

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

A. nucleus

B. plasma membrane

C. mitochondrian

D. cytoplasm

Answer: D

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269. Who first saw and described a live cell

A. Anton von Leeuwenhoek

B. Matthias Scheiden

C. Theodore Schwan

D. Rudolf Virchow

Answer: A

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270. In animal cells lipid- like sterodial hormones are synthesized in

A. rough Endoplasmic Reticulum (RER)

B. smooth Endoplasmic Reticulum (SER)

C. Golgi apparatus

D. lysosomes

Answer: B

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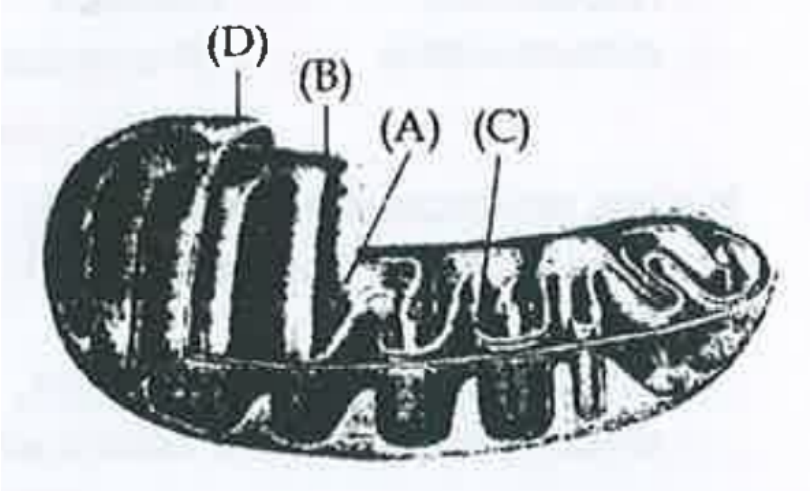
271. The figure below shows the structure of a mitochondrion with its four parts labelled (A), matched with its function.



A. Part (D) : Outer membrane - gives rise to inner membrane by splitting

B. Part (B) : Inner membrane - forms infoldings called Cristae

C. Part (C) : Cristae -possess singel circular DNA molecule an ribosomes

D. Part (A) : Matrix - major site for respiratory chain enzymes

Answer: B

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

A. Golgi complex

B. proxisome

C. vacuole

D. lysosome

Answer: B

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273. Important site for formation of glycoproteins and glycolipids is

A. vacuole

B. Golgi apparatus

C. plastid

D. lysosome

Answer: B

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274. Peptide synthesis inside a cell takes place in

A. chloroplast

B. mitochondria

C. chromoplast

D. ribosomes

Answer: D

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275. Peptide synthesis inside a cell takes place in

A. chloroplast

B. mitochondria

C. chromoplast

D. ribosomes

Answer: D

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276. Ribosomes were first observed under the EM as dense particles by

A. Robert Brown

B. Camillo Golgi

C. George Palade

D. T.O. Diener

Answer: C

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

A. Ribosomes - those on chloroplasts are larger (80s) while those in the cytoplasm are smaller (70s)

B. Lysosomes - optimally active at a pH of about 8.5

C. Thylokoids - flattened membranous sacs forming the grana of chloroplasts

D. Centrioles sites for active RNA synthesis

Answer: C

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278. 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. ER

B. Mesosome

C. Ribosome

D. Peroxisome

Answer: C

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279. Which one of the following does not differ in E. coli and Chlamydomonas

A. Chromosomal organization

B. Cell wall

C. Cell membrane

D. Ribosomes

Answer: C

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280. What is true about ribosomes ?

A. These are composed of ribonucleic acid and proteins

B. These are found only in eukaryotic cells

C. These are self-splicing introns of some RNAs

D. The prokaryotic ribosomes are 80 S, where "S" stands for sedimentation coefficient.

Answer: A

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281. Select the corret statement form the following regrading cell membrance .

A. Proteins make up 60 to 70% of the cell membrance

B. Lipids are arranged in a bilayer with polar heads towards the inner part

C. Fluid mosaic model of cell membrane was proposed by Singer and Nicoloson

D. Na^+ and K^+ ions move across cell membrne by passive transport

Answer: B

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282. The Golgi complex plays a major role

A. as energy transferring organells

B. in post translational modificates of propteins and glycosidation of liquids

C. in trapping the light and transforming it inot chemical energy

D. in degesting protiens and carbohydrates

Answer: B

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283. Which one of the following organelle in the figure corretly matches with is function ?

A. Golgi appartaus, formation of glycolipds

B. Rough endoplasmic reticulum,protein synthesis

C. Rough endoplasmic reticulum, formation of glycorproteins

D. Golgi apparatus protein synthesis.

Answer: B

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284. Pigment-containing membranous extensions in some cyanobacteria are

A. Penumatophers

B. Chromatophores

C. Heterocysts

D. Basal bodies

Answer: B

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285. Match the following and select the correct answer

Centriole	(i)Infoldings in mitochondria
Chlorophyll	(ii)Thylakoids
Cristae	(iii)Nucleic acids
Ribozymes	(iv)Basal body cilia or flagella

A. $\begin{matrix}(1) & (2) & (3) & (4)\\ (iv) & (iii) & (i) & (ii)\end{matrix}$

B. $\begin{matrix}(1) & (2) & (3) & (4)\\ (iv) & (ii) & (i) & (iii)\end{matrix}$

C. $\begin{matrix}(1) & (2) & (3) & (4)\\ (i) & (ii) & (iv) & (iii)\end{matrix}$

D. $\begin{matrix}(1) & (2) & (3) & (4)\\ (i) & (iii) & (ii) & (iv)\end{matrix}$

Answer: B

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286. The motile bacteria are also to move by

A. pili

B. fimbriae

C. flagella

D. cilia

Answer: C

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

A. Lamins

B. Microtubules

C. Microfilaments

D. Intermediate filaments

Answer: C

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288. Cytochromes are found in

A. outer wall of mitochondria

B. cirstae of mitochondria

C. lysosomes

D. matrix of mitochondria

Answer: B

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289. DNA is not present in :

A. ribosomes

B. nucleus

C. mitochondria

D. choroplast

Answer: A

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290. Nuclear envelope is a derivative of

A. membrane of Golgi complex

B. microtubles

C. rought endoplasmic reticulum

D. smooth endoplasmic reticulum

Answer: C

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291. The structures that are formed by stacking of organized flattered membrances sacs in the chloroplasts are

A. grana

B. stroma lamellae

C. stroma

D. cristae

Answer: A

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292. Select the correct matching in the following pairs:

A. Smooth ER-Synthesis of lipids

B. Rough ER - Synthesis of glycoge

C. Rough ER- Oxidation of fatty acids

D. Smooth ER - Oxidation of Phospholipids

Answer: A

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293. Chromatophores taken part in

A. photosynthesis

B. growth

C. movement

D. respiration

Answer: A

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294. Which of the following structures is not found in a prokaryotic cell?

A. Nuclear envelope

B. ribosomes

C. Mesosome

D. Plasma membrane

Answer: A

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295. Match the columns and identify the correct option

Column -I	Column-II
Thylakoids	(i) Disc-shaped sacs in golgi appartus
Cristae	(ii) Condensed structure of DNA
Cisternae	(iii) Flat membranous sacs in stroma
Chromatin	(iv) Infoldings in mitochondria

A. $\begin{matrix}(1) & (2) & (3) & (4)\\ (iv) & (iii) & (i) & (ii)\end{matrix}$

B. $\begin{matrix}(1) & (2) & (3) & (4)\\ (iii) & (iv) & (i) & (ii)\end{matrix}$

C. $\begin{matrix}(1) & (2) & (3) & (4)\\ (iii) & (i) & (iv) & (ii)\end{matrix}$

D. $\begin{matrix}(1) & (2) & (3) & (4)\\ (iii) & (iv) & (ii) & (i)\end{matrix}$

Answer: B

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296. Which of the following are not membrane bound ?

A. Vacuoles

B. ribosomes

C. Lysosomes

D. Mesosomes

Answer: B

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297. A protoplast is a cell

A. without plasma membrane

B. without nucleus

C. undergiong division

D. without cell wall

Answer: D

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298. Cellular organelles with membranes are

A. nuclei, ribosomes and mitochondria

B. chromosomes, ribosomes and endoplasmic reticulum

C. endoplasmic reticulum, ribosomes and nuclei

D. lysosmes, Golgi apparatus & mitochondria

Answer: D

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299. Water soluble pigments found in plant cell vacuoless are

A. chlorophylls

B. caroteniods

C. anthocyanins

D. xanthophylls

Answer: C

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300. Microtubules are the constituents of

A. Spindle fibres, Centrioles and Cilia

B. Centrioles, Spindle fibres and Chromotin

C. Centrosome, Nucleosome and Centrioles

D. Cilia

Answer: A

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301. 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. (ii) is true but (i) is false

B. (i) is true but (ii) is false .

C. Both (i) and (ii) are false.

D. Both (i) and (ii) are correct.

Answer: B

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

A. Chloroplasts

B. Lysosomes

C. Nuclei

D. Mitochondria

Answer: B

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

A. Polymer

B. Polypeptide

C. Okazaki fragment

D. Polysome

Answer: D

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304. Select the mismatch

A. Gas vacuoles - Green bacteria

B. Large central vacuoles - Animal cells

C. Protists - Eukaryotes

D. Methanogens - Prokaryotes

Answer: B

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305. A cell organelle containing hydrolytic enzymes is

A. Lysosome

B. Microsome

C. Ribosome

D. Mesosome

Answer: A

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

A. Phospholipid synthesis

B. Cleavage of signal peptide

C. Protein glycosylation

D. Protein folding

Answer: A

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307. Select the incorrect match.

A. Polytene chromosomes – Oocytes of amphibians

B. Submetacentric chromosomes – L - shaped chromosomes

C. Allosomes – Sex chromosoems

D. Lampbrush – Dipotene bivalents

Answer: A

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308. Many ribosomes may associate with a single mRNA to form mutiple copies of a poolypeptide simultaneously. Such strings of ribosomes are termed as

A. Nucleosome

B. Platidome

C. Polyhedral bodies

D. Polysome

Answer: D

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309. Select the wrong statement

A. Mitochondria are the powerhouse of the cell in all kingdoms excepts Monera,

B. Pseudopodia are locomotory and feeding structures in Sporozoans

C. Mushrooms belong to Basidiomycetes.

D. Cell wall is present in membres of Fungi and plantae.

Answer: B

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310. The Golgi complex participates in

A. Activation of amino acids

B. Respiration is bacteria

C. Formation of secretory vesicles

D. Fatty acids

Answer: C

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311. Which of the following is true for nucleolus ?

A. It is site for active ribosomol RNA synthesis.

B. It takes part in spindle formation

C. It is a membrance-bound structure.

D. Larger nucleoli are present in dividing cells

Answer: A

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