BIOLOGY

BOOKS - CENGAGE BIOLOGY (HINGLISH)

CELL: STRUCTURE AND FUNCTIONS

Exericses

1. Which of the following cytoskeletal element pLays an important role m the movement of chromosomes?

A. Microfilaments

B. Microtubules

C. Intermediate filaments

D. All of these

Answer: B

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2. Bacterial genome or nucleoid is made up of

A. A single double-stranded chromosome with histone

B. RNA and histories

C. A single double-stranded DNA, not complexed with histone proteins, t'for packed in the chromosome

D. A single stranded circular DNA

Answer: C

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3. In bacterial cell, DNA is extensively looped and coiled with the help of

A. Acid proteins

B. Histones

C. Basic nucleoid protein called as polyamines

D. Actin

Answer: C

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4. Two animal cells are interconnected by

A. Plasmodesmata

B. Cell wall

C. Desmosome

D. Plasma membrane

Answer: A

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5. The type of growth shown by primary cell wall is

A. Accretionary

B. Instussuceptionary

C. Protoplasmic

D. None, as it cannot expand or grow

Answer: B

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6. Plasmodesmata often has ER (endoplasmic reticulum) tubule called as

A. Symplasm

B. Desmotubule

C. Apoplasm

D. Intermediate filaments

Answer: B

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7. Which of the following is associated with the detoxification of drugs and muscle contraction by the release and Ca^{2+} ions?

A. Golgi complex

B. RER

C. SER

D. Free ribosomes

Answer: C

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8. Organelle involved in modification and routing of newly synthesised proteins to their destination is

A. Chloroplast

B. Mitochondria

C. Lysosome

D. Endoplasmic reticulum

Answer: D

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9. The term endoplasmic reticulum was used by

A. Keith Poter

B. Thompson

C. Robertson

D. Keith Peter and Thompson

Answer: A

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10. Ribosomes, when associated with ER. attach with their

A. Smaller subunit

B. Larger subunit (60S)

C. 80S subunit

D. Either by smaller or by larger subunits

Answer: A

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11. Ribosomes are attached to endoplasmic reticulum through

A. Ribophorins

B. r-RNA

C. t-RNA

D. Hydrophobic interaction

Answer: A

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12. RER is well developed in cells engaged in the synthesis of

A. Nucleotides

B. Proteins

C. Lipids

D. Secretory products

Answer: B

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13. SER is mainly found in cells actively engaged in

A. Secretion activity

B. Proteins

C. Lipid metabolism

D. Catabolic activity

Answer: C

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14. Golgi apparatus is specialized for all except

A. Glycosidation and glycosylation of lipids and proteins

B. Recycling of the plasma membrane pinched off by pi- nocytosis and phagocytosis

C. Secretion

D. Intracellular digestion

Answer: D

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15. Which of the following statements is incorrect about the Golgi apparatus?

A. The sacs on the forming face (cis-face) are associated with ER.

B. Golgi apparatus was studied by Camillo Golgi in the nerve cells of owl by metallic impregnation technique

C. Golgi apparatus in plants is called as dictyosome and secretes mucilage in the root cap cells.

D. Golgi apparatus has no role in the modification of proinsulin

Answer: D

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16. Lysosomes are formed by budding off vesicles from Golgi apparatus and contain

A. Oxidizing enzymes

B. 40 different acid hydrolases

C. Respiratory enzymes

D. Basic hydrolases

Answer: B

17. Which of the following is likely to show the absence of lysosomes?

A. Cyanophyceae

B. Protozoa

C. Anther tapetum

D. Mammalian leucocytes

Answer: B

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18. "Lysosomes" were discovered by

A. Rohdin

B. Pemer

C. Christian de Duve

D. None of these

Answer: C

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19. Which of the following organelles shown polymorphism ?

A. Golgi apparatus

B. Lysosome

C. Mitochondria

D. Chloroplast

Answer: B

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20. Autolysis is connected with

A. Ribosome

B. Kmetosome

C. Lysosome

D. Golgi apparatus

Answer: C

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21. Which of the following organelles possess oxidases and are associated with oxidation reaction other than those oF respiration?

A. Spherosomes

B. Peroxisomes

C. Lysosomes

D. Golgi

Answer: B

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22. Which of the following,organelles takes part in photores-piration?

A. Glyoxysome

B. Peroxisome

C. Dictyosome

D. ER

Answer: B

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23. Peroxisomes contain peroxide-producing enzymes.

These are found in

A. Plant cells

B. Animal cells

C. Both (1) and (2)

D. Bacteria and blue green algae

Answer: C

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24. Which of the following is peroxide-destroying enzyme present in peroxisome?

A. Urate oxidase

B. Catalase

C. Amino acid oxidase

D. Feroxidase

Answer: B

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25. Non-secretory proteins are synthesized by

A. ER-bound ribosomes

B. Free ribosomes

C. Polysomes

D. Endosomes

Answer: B

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26. Find out the incorrect statement w.r.t. glyoxysomes

A. It is reported from the endosperm of germinating seeds

B. They usually occur in fat-rich plant cells.

C. They are associated with glyoxylate cycle.

D. They develop from mitochondria

Answer: D

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27. The proper folding of proteins following synthesis is as- sisted by

A. Polyribosomes

B. Specific proteins called chaperons

C. Polysomes

D. Free ribosomes

Answer: B

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28. Protein synthesis in an animal cell occurs

A. Only on the ribosomes present in the cytosol

B. Only on ribosomes attached to the nuclear envelope and ER

C. On ribosomes present in the cytoplasm as well as in mitochondria

D. On ribosomes present in the nucleolus as well as in cytoplasm

Answer: C

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29. When ATP conecntration is low or the respiratory chain is inhibited, the mithcohondria are seen in.

A. Active state

B. Condensed state

C. Orthodox state

D. Both (1) and (2)

Answer: C

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30. Mitochondria are semi autonomous as they posses

A. DNA

B. DNA+ RNA

C. DNA+ RNA ribosomes

D. Proteins

Answer: C

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31. Which of the following organelle is concerned with generation of ATP through electron transport and oxidative phosphorylation?

A. Chloroplast

B. Mitochondria

C. Glyoxysome

D. Both(1)and(2)

Answer: B

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32. F_0, F_1 particles are also called as

A. Quantasomes

B. Glyoxysome

C. Paiade particles

D. Oxysomes

Answer: D

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33. Organelle rich in Manganese is

A. Ribosome

B. Mitochondria

C. Chloroplast

D. Nucleus

Answer: D

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34. The presence of DNA in mitochondria and chloroplast supports the hypothesis that

A. Glycolysis occurs in both mitochondria and chloroplast

B. Mitochondria and chloroplast both originated as independent free living organisms

C. ATP is produced in mitochondria as well as in chloroplast

D. Mitochondria and chloroplast undergo meiosis and mitosis independent of nucleus

Answer: B

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35. In mitochondria, ATP synthesis occurs

A. in the matrix

B. in the intracristal space

C. at the outer membrane

D. at the outer membrane

Answer: B

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36. Oxysomes or $F_0 - F_1$ particles occur on

A. Surface of the inner membrane of mitochondrion

B. Thylakoid membrane of chloroplasts

C. Outer membrane of mitochondrion

D. Rough endoplasmic reticulum

Answer: A

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37. Mitochondria are not found in

A. Mature WBC

B. Mature RBC

C. Nerve cell

D. Sperm

Answer: B

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38. The mitochondrial DNA differs from the nuclear DNA in

A. Having association with histones

B. Being circular in nature

C. Having higher C-G ratio

D. All of these

Answer: B

39. Genes for cytoplasmic male sterility in plants are located in

A. Mitochondrial genome

B. Chloroplast genome

C. Nuclear genome

D. Cytosol

Answer: D

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40. In chloroplasts the chlorophyll is located in

A. Grana

B. Pyrenoid

C. Strama

D. Both grana and stroma

Answer: A

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41. Which of the following organelles stores proteins?

A. Amyloplasts

B. Aleuroplasts

C. Plastids

D. Elaioplasts (oleosomes)

Answer: B

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42. Grana in chloroplast is formed by the piling of

A. Cristae

B. Thylakoids

C. Oxisomes

D. Dictyosomes

Answer: B

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43. The symbiont hypothesis suggests that there are similarities between prokaryotes, mitochondria, and

chloroplasts like

A. Presence of circular DNA associated with histones and 70S ribosomes

B. Presence of circular DNA not associated with histones and 70S ribosomes present

C. 50S ribosomes and DNA

D. 30S ribosomes and DNA

Answer: B

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44. Quantasomes are found in

A. Mitochondria

B. Chloroplast

C. Nucleus

D. Lysosome

Answer: B

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45. Each quantasome contains

A. 100 chlorophyll molecules

B. 200 chlorophyll molecules

C. 300 chlorophyll molecules

D. 230 chlorophyll molecules

Answer: D

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46. Hammerling's experiment on Acetabularia proved the role of

A. Chromosomes in heredity

B. Nucleus in heredity

C. Nucleo-cytoplasmic ratio

D. Cytoplasm in controlling differentiation

Answer: B

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47. At certain places, the nuclear envelope is interrupted by the presence of nuclear pores which are enclosed by cir- cular structures called as

A. Perinuclear space

B. Annuli

C. Pore complex

D. Nucleolus

Answer: B

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48. Telomeres

A. Initiate RNA synthesis

B. Seal ends of chromosomes

C. Have guanine rich repeats

D. Both (2) and (3)

Answer: D

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49. The terms 'nucleolus' was coined by

A. Bowman

B. Fontana

C. Flemming

D. Leeuwenhoeck

Answer: A

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50. Telomerase is an enzyme which is a

A. Simple protein

B. RNA

C. Fibonucleoprotem

D. Repetitive DNA

Answer: C

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51. Nucleolus is produced from

A. 1° constriction

B. Nucleouls-orginzing region of certion chromosomes

C. Nuclear envelope

D. ER

Answer: B

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52. Cystolith contains

A. Calcium citrate

B. Calcium carbonate

C. Silica

D. Calcium oxalate

Answer: D

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53. Whicch of the following suggests advanced features of an organism ?

A. The karyotype shows a large size difference betweenthe smallest and the largest

chromosome.

B. Karyotype has few metacentric chromosomes.

C. Asymmetric karyotype

D. All of these

Answer: D

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54. Tolbert is associated with which one of the following cell structures?

A. Peroxisomes

B. Spherosomes

C. Quantasomes

D. Glyoxysomes

Answer: A

55. A single mitochondrion is found in

A. Flight muscles of insects

B. Human sperm

C. Micrasterias

D. Chaos chaos

Answer: C

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56. The smallest cell organelle is

A. Peroxisorne

B. Spherosome

C. Ribosome

D. Lysosome

Answer: C

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57. The complex formed of centriole and kinoplasm called as

A. Diplosome

B. Centrosphere

C. Centrosome

D. Kinetosome

Answer: C

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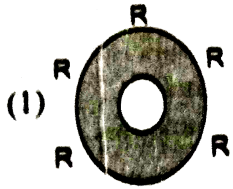
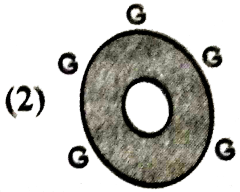
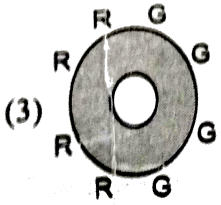
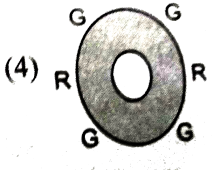
58. Man and mouse cells are treated with red and green fluorescent dyes separately and are made to fuse. The resultant eel ls when kept at $37^{\circ}C$, the distribution of dye on the surface of cell will be

A. 

B. 

C. 

D. 

Answer: D

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59. Adenosine triphosphate(ATP) powers the movement of cilia and flagella. Adenosine triphosphate activity is present in.

A. Nexium protein

B. Dynein protein

C. Massule

D. Both (1) and(2)

Answer: B

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60. The rRNAs of 80S ribosomes of larger subunit are

A. 18S

B. 23S +5S

C. 28S +5.8S +5S

D. 16S

Answer: C

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61. A component of cytoskeleton is

A. Microtubule

B. Bone

C. Chitin

D. Cartilage

Answer: A

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62. Kinetochore is

A. Fibrous granular structure within centromere

B. Surface of centromere

C. Constriction near chromosome end

D. End of chromosome

Answer: B

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63. Who amongst the following scientists is credited with the discovery of cell and published Micrographia?

A. Robert Brown

B. Robert Hooke

C. Schleiden

D. Schwann

Answer: B

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64. Who was the first to observe living substance in the cells

A. Anton van Leeuwenhoek

B. Alfonso Corti

C. Robert Brown

D. Johannes Purkinje

Answer: A

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65. Nucleus was first observed in the cells of orchid roots in 1831 by

A. Robert Brown

B. Hugo von Mohl

C. Schleiden

D. Schwann

Answer: A

66. Protoplasm was regarded as the "physical basis of life " by

A. Purkinje

B. Huxley

C. Rudolf Virchow

D. Schwann

Answer: B

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67. Which of the following does not show a circular DNA?

A. Bacterial cell

B. Nucleus

C. Mitochondria

D. Chloroplast

Answer: B

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68. The saccules and utricles were names used for the cells by which of the following?

A. Robert Brown

B. Malpighii

C. Purkinje

D. Swanson

Answer: D

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69. The cells discovered in thin sections of cork by Robert Hooke were actually

A. Cellulose

B. Living cell

C. Cell coat

D. Cell wall

Answer: d

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70. Most of the water found in the young cell occurs in

A. Cell wall

B. Nucleus

C. Cytoplasm

D. Nucleolus

Answer: C

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71. Energy currency of the cell is

A. DNA

B. RNA

C. ATP

D. Vitamins

Answer: C

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72. Cell theory was put forward by

A. Schleiden and Schwann in 1838-39

B. Sutton and Boveri

C. Watson and Crick

D. Darwin and Wallace

Answer: A

73. Cell theory is applicable to all except

A. Animals

B. Plants

C. Fungi

D. Viruses

Answer: D

74. Who was the first to explain that the cells divide and new cells are formed from the pre-existing cells (Omnis cellu- la-e-ce/lula) in 1855?

A. Louis Pasteur

B. RudolfVirchow

C. Nagali

D. Robert Brown

Answer: B

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75. The longest cell in the human body is

A. Liver cell

B. Muscle cell

C. Neuroglia cell

D. Nerve cell

Answer: D

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76. What is absent in mammalian erythrocytes?

A. Aerobic respiration

B. Nucleus

C. DNA

D. All of these

Answer: D

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77. One of the following is an exception to cell theory

A. Bacteria

B. Prokaryotes

C. Blue green algae

D. Bacteriophage

Answer: D

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78. The membrane covering the vacuole is known as

A. Desmosomes

B. Tonoplast

C. Plasmodesmata

D. Tyloses

Answer: A

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79. Which is a non-membranous (not covered by membrane) organelle?

A. Ribosome

B. Lysosome

C. Mitochondria

D. Chloroplast

Answer: A

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80. Which one of the following is absent in plant cell?

A. Vacuole

B. Cell wall

C. Centrosome

D. Plastids

Answer: C

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81. Which one of the following does not have the ability to divide?

A. Nerve cells

B. Liver cells

C. Muscle cells

D. Bone marrow cells

Answer: A

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82. The prokaryotic cells are characterized by

A. Distinct chromosome

B. Absence of chromatin material

C. Absence of nuclear membrane

D. Distinct nuclear membrane

Answer: C

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83. Cells originate

A. from pre existing cells

B. from abiotic materials

C. by bacterial fermentation

D. by regeneration ofold cells

Answer: A

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84. Which of the following is present in both plant and animal cells?

A. Primary wall

B. Secondary wall

C. Plasma membrane

D. Plastids

Answer: C

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85. Which of the following has one-envelope system?

A. Prokaryotic cell

B. Eukaryotic cell

C. Both (1) and (2)

D. None of these

Answer: a

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86. Small cells are metabolically active as they have

A. Higher smface-area-to-volume ratio

B. Higher nucleo-cytoplasmic ratio

C. Lower nucleo-cytoplasmic ratio

D. Both (1) and (2)

Answer: D

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87. Which of the following cells do not show DNA duplication or RNA sythesis ?

A. Liver cells

B. Muscle cells

C. Nerver cells

D. Mature RBCs

Answer: D

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88. Who proposed for the first time that cells are totipotent ?

A. Haberlandt

B. Maheshwari

C. Steward

D. White

Answer: A

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89. The surface-to-volume ratio of a cell

A. Remains constant

B. Decreases with increasing size

C. Increases with increasing size

D. Both (2) and (3)

Answer: B

90. The cells which are capable of undergoing division and development are

A. Meristematic cells

B. Stem cells

C. Differentiated cells

D. Both (1) and (2)

Answer: D

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91. The trilamellar model was proposed by

A. J .D. Robertson

B. Danielli and Davson

C. Goiter and Grindell

D. Singer and Nicolson

Answer: B

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92. An animal cell differs from plant cells in not having

A. Plastids

B. Cell wall

C. Glyoxysome

D. All of these

Answer: D

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93. Tue genetic material of a bacterial cell is localized within a discrete region called as

A. Nucleus

B. Nucleolus

C. Plasmid

D. Nucleoid

Answer: D

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94. Which of the following is present in the prokaryotes?

A. Nuclear envelope

B. Golgi apparatus

C. Mitochondria

D. Ribosomes

Answer: D

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95. A Gram negative bacteria differ from a Gram positive bacteria in having

A. Thick cell wall and is primarily made up of peptido- glycan

B. Complex cell envelope made up of three layers

C. cell wall of 20- 80 nm in thickness and also contains tightly bound techoid acids

D. Absence of cell wall lipids

Answer: D

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96. Which of the following antibiotics inhibits the cross-linking of peptidoglycan strands, thus causing the lysis of the bacterial cell?

A. Penicillin

B. Cephalosporin

C. Chloromycetin

D. Both (1) and (2)

Answer: D

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97. The pentacyclic sterol like molecules which stabilize the bacterial cell membrane are called as

A. Cholesterol

B. Hopanoids

C. Spectrin

D. Glycophonns

Answer: B

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98. Glycocalyx or cell coat which functions as the cell recognition center is made up of

A. Proteins

B. Lipids

C. Proteins and lipids

D. Glycoproteins and glycolipids

Answer: D

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99. Plasma membrane is asymmetric because

A. Lipids present in the outer and inner side of the bilayer are different.

B. Extrinsic proteins are more abundant on the inner surface than on the outer surface.

C. Oligosaccharides are attached only to the external surface of lipids and proteins of a biomembrane

D. All of these

Answer: C

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100. Components of the eukaryotic plasma membrane are

A. Protein and liqids

B. Protein and carbohydrates

C. Lipids (20-79%), proteins (20-70%), oligosaccharides (1-5%), and water (20%)

D. Lipids (20-70%), proteins (20-79%), proteins (20-70%), carbohydrates (1-5%) and DNA

Answer: C

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101. The concept of unit membrane was propounded by

A. Danielli

B. Davson

C. Robertson

D. Both (1) and (2)

Answer: C

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102. The universally accepted model of plasma membrane is

A. Lamellar model

B. Unit membrane model

C. Fluid mosaic model

D. Overton model

Answer: C

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103. According to the fluid mosaic model of plasma membrane, extrinsic proteins are

A. Superficially arranged and cannot be separated easily

B. Peripheral proteins and are loosely connected to membranes and, therefore, can be easily removed in aqueous medium

C. Integral proteins which project beyond the lipid layer on both sides of the membrane and are considered as channel proteins

D. Tightly attached to lipids and cannot be separated

Answer: B

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104. According to widely accepted "Fluid mosaic model" cell membranes are semi-fluid, where lipids and integral proteins can diffuse randomly. In recent years, this model has been modified in several repects. In this regard, which of the following statements is incorrect

A. Proteins in cell membranes can travel within the lipid bilayer

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

C. Proteins can remain confined within certain domains of the membranes.

D. Many proteins remain completely embedded within the lipid bilayer

Answer: B

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105. Fluid mosaic model of cell membrane proposes

A. A lipid bilayer with embedded proteins only

B. A lipid bilayer with proteins on the outer surface only

C. A lipid bilayer coated with proteins on both the surfaces

D. A lipid bilayer with proteins of two types, embeddec' (intrinsic) and superficial (extrinsic)

Answer: D

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106. Out of proteins lipids and carbohydrates present in a "cell membrane".

A. Carbohydrates are minimum

B. Carbohydrates are maximum

C. Lipids are minimum

D. All three are in equal proportion

Answer: A

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107. Carrier molecules facilitating transport across cell membrane are

A. Proteinaccous

B. Fatty acids

C. Starch

D. Alkaloids

Answer: A

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108. Protein icebergs in a sea of lipids means

A. Unit membrane concept

B. Sandwich model

C. Fluid mosaic model

D. None of these

Answer: C

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109. Extrinsic and intrinsic proteins found in plasma membrane are in the ratio

A. $70:30$

B. $30:70$

C. $40:60$

D. $60:40$

Answer: D

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110. The main function of plasma membrane is to

A. Store cell material

B. Control all cellular activities

C. Maintain cell shape and size

D. Regulatdhe inflow and outflow of material through the cell wall

Answer: D

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111. The plasma membrane is more permeable to

A. Polysaccharides

B. Proteins

C. Glycoproteins

D. Phospholipids

Answer: D

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112. Plasma membrane, particularly in animal cells, is elastic due to

A. Lipids

B. Proteins

C. Carbohydrates

D. None of these

Answer: D

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113. In the ultra structure of cell membrane and its functions,

A. Phospolipids are more than carbohydrates for signal

B. Prcteins are lesser than carbohydrates for fluidity.

C. The amount of phospholipids is highly variable for the transport of hydrophilic molecules.

D. The amount of protein is unequally distributed in the membrane for better transport.

Answer: D

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114. Two basic components of cytoskeleton are

A. Actin and myosin

B. Tubulin and myosin

C. Tubulin and actin

D. All of these

Answer: C

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115. Hydrolytic enzymes are abundantly found in which cell organelles :-

A. Ribosome

B. Lysosome

C. Oxysome

D. Endoplasnmic reticulum

Answer: B

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116. Which of the following is the site of lipid synthesis

A. Rough ER

B. Smooth ER

C. Golgi bodies

D. Ribosome

Answer: B

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117. Which of the following pair lack the unit membrane

A. Nucleus and ER

B. Mitochondria and Chloroplast

C. Ribosome and nucleolus

D. Golgi body and lysosome

Answer: C

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118. Golgi body is concerned with

A. Respiration

B. Secretion

C. Excretion

D. Degradation

Answer: B

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119. The cells without nuclei are present in

A. Vascular cambium

B. Root hair

C. Companion cell

D. Members of sieve tube

Answer: D

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120. Plant with minimum number of chromosomes is

A. Haplopappus gracilis

B. Salix tetrasperma

C. Poa

D. Cynodon

Answer: A

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121. Heteropycnosis is exhibited by

A. Autosome

B. Chromatid body

C. Nucleolus

D. Sex chromosome

Answer: D

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122. The main function of lysosome is

A. Sexual reproduction

B. Extracellular digestion

C. Intracellular digestion

D. Both (2) and (3)

Answer: D

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123. Which of the following maintains continuity between the water and lipid phases inside and

outside the cells?

A. Cell wall

B. Lecithin

C. Cell vacuole

D. Cell membrane of woody plants

Answer: B

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124. The membrane surrounding cell vacuole is called

A. Tonoplast

B. Cell wall

C. Plasma membrane

D. Cell membrane

Answer: A

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125. The diagrammatic representation of chromosomes is known as

A. Idiogram

B. Karyotype

C. Holotype

D. Homotype

Answer: A

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126. Thread-like structures that are composed of nuclear DNA of eukaryotic cells and are carrier of genetic information are known as chromosomes. The term "chromosome" was given by

A. Waldeyer

B. Balbiani

C. Purkinje

D. Sutton

Answer: A

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127. Chromosomes present in prolonged prophase in the salivary glands of Drosophila are

A. Polytene chromosomes

B. b-chromosomes

C. Lampbrush chromosomes

D. Supernumerary chromosomes

Answer: A

128. chromosomes at anaphase are of the position of Vanous shapes due to

A. S and M phase

B. G_1 and S phase

C. Centro mere

D. DNA

Answer: C

Watch Video Solution

129. The terms nucleosome was given by oudet .Olins and olins called these particle as "nu" bodies .which histones is absent nucleosome ?

A. H_1

B. H_2

C. H_3a

D. H_4

Answer: A

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130. Nucleosme given beaded appearane to chromosome.They help in the packing of DNA in chromosome. A nucleosome has

A. About 2 turns of DNA

B. 8 histone molecules of 4 types (2 mols of each of H_2aH_2b, H_3 and H_4)

C. 200 nitrogen base pairs

D. All of the above

Answer: D

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131. Salivary glands chromosome were discovered by Balbi- ani (1881) from the salivary glands oflarva of

A. Chironomus

B. Drosophila

C. Silkworm

D. Lac worm

Answer: B::C

Watch Video Solution

132. In SAT chromosome ,SAT (satellite) is terminal part of chromosome beyond secondary constrition , It contains :

A. DNA

B. RNA

C. repetitive DNA

D. None of these

Answer: C

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133. Material exchange through nucleopores is facilitated by

A. Lamina propria

B. lipid layer

C. Nucleoplasmin

D. Nucleolus

Answer: B::C

Watch Video Solution

134. Centriole is

A. Microtubular and membraneless

B. Absent in Amoeba, red algae, blue-green algae, conifers, and angiosperms and is made up of peripheral triplet microtubules

C. Basically locomotory and their role in spindle formation is secondary

D. All of the above

Answer: D

135. Association of m-RNA with several ribosomes is called

A. Polysome

B. Informosome

C. Both (1) and (2)

D. None of these

Answer: A

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136. Lampbrush chromosome is found in

A. Oocyte of amphibians

B. Salivary gland of mosquito

C. Silk gland of silkworm

D. None of the above

Answer: A

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137. Prokaryotic ribosomes are generally

A. 50S

B. 60S

C. 70S

D. 80S

Answer: C

Watch Video Solution

138. Mesosomes of prokaryotes are functionally similar to

A. Mitochondria

B. Peroxysomes

C. Lysosomes

D. Ribosomes

Answer: A

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139. RER is rough as it contains the

A. Volutin granules on its surface

B. Ribosomes on its surface

C. Lysosomes on its surface

D. Mitochondria on its surface

Answer: B

Watch Video Solution

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

A. Protein molecules alone

B. Lipid molecules alone

C. Both lipid and protein molecules

D. Glycolipids and glycoproteins

Answer: D

Watch Video Solution

141. Which among the following can be seen only under elec- tron microscope?

A. Chloroplast

B. Ribosome

C. Leucoplast

D. Nucleus

Answer: B

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142. A mature plant cell has

A. Cell wall and protoplasm

B. Protoplasm and vacuole

C. Vacuole and cell wall

D. Protoplasm cell wall and vacuole

Answer: D

Watch Video Solution

143. The larger sub-unit in 80S ribosome is

A. 50S

B. 60S

C. 40S

D. 0S

Answer: B

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144. Golgi bodies are absent in

A. Plants

B. Bacteria

C. Animals

D. Eukaryotic cells

Answer: B

Watch Video Solution

145. Endoplasmic reticulum is more dveloped in

A. Green cells

B. Young cells

C. Mature cells

D. Bacteriophages

Answer: C

Watch Video Solution

146. Mitochondria are related to

A. Prokaryotic cells

B. Plasmids

C. Prion

D. Virus

Answer: A

Watch Video Solution

147. The main function of lysosomes is

A. Digestion

B. Replication

C. Translation

D. Translocation

Answer: A

Watch Video Solution

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

" " Or

Which of the following has a single unit membrane

A. Ribosome

B. Peroxisome

C. Nucleus

D. Centrosome

Answer: B

Watch Video Solution

149. L-shaped chromosomes are called

" " Or

When the chromosome has a centromere nearer to one end of the chromosome resulting into one shorter and one longer arm, the chromosome is termed as

A. Sex-chromosomes

B. Acrocentric chromosomes

C. Telocentric chromosomes

D. Sub-metacentric chromosomes

Answer: D

Watch Video Solution

150. Term chromosome was coined by

A. Balbiani

B. Waldeyer

C. Sutton

D. Purkinje

Answer: B

Watch Video Solution

151. A chromosome with sub terminal centromere is

A. Telocentric chromosome

B. Acrocentric chromosome

C. Metacentric-chromosome

D. Sub-metacentric chromosome

Answer: B

152. How many types of cells are known

A. One

B. Two

C. Three

D. Four

Answer: B

Watch Video Solution

153. In which of the following microorganisms, mitosis does not occur?

A. Green algae

B. Fungi

C. Bacteria

D. Higher plants

Answer: C

Watch Video Solution

154. A mature plant cell has

A. Cell wall

B. Vacuole

C. Protoplasm

D. All of the above

Answer: D

Watch Video Solution

155. In eukaryotic cell, the type of ribosomes is

A. Only 70S

B. Only 80

C. 70S and 80S both

D. Only 50S

Answer: C

Watch Video Solution

156. The genetic material of prokaryotic cells is called

A. Nucleus

B. Nucleolus

C. Nucleoid

D. Centrosome

Answer: C

View Text Solution

157. Which organelle of plant cells secrets polysaccharide to make cell walls?

A. Golgi-bodies

B. Lysosome

C. Mitochondria

D. Chloroplast

Answer: A

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158. R.N.A. contains which of the following base, in place of Thymine of D.N.A. :-

A. Thymine

B. Uracil

C. Adenine

D. None of these

Answer: B

Watch Video Solution

159. The main function of lysosomes is

A. Only intracellular digestion

B. Only extracellular digestion

C. Both intracellular and extracellular digestions

D. None

Answer: C

View Text Solution

160. A eukaryotic cell has

A. Single chromatin fiber

B. Definite nucleus

C. Incipient nucleus

D. None of these

Answer: B

Watch Video Solution

161. The synthesis of liqids and proteins is associated with

A. Endoplasmic reticulum

B. Mitochondria

C. Chloroplast

D. Lysosmes.

Answer: A

Watch Video Solution

162. Cell theory was proposed by

A. Schleiden and Schwann

B. Watson and Crick

C. Darwin and Wallace

D. Mendel and Morgan

Answer: A

Watch Video Solution

163. Which one of the following is not found in animal cell?

A. Nucleus

B. Golgi bodies

C. Chloroplast

D. Mitochondria

Answer: C

 Watch Video Solution

164. Unit membrane consists of

A. Lipid + Sugar + Lipid

B. Protein + Lipid + Protein

C. Lipid + Protein + Lipid

D. Protein

Answer: B

Watch Video Solution

165. Principal constituents of chromosomes are

A. DNA+ Protein

B. DNA

C. RNA

D. tRNA

Answer: A

Watch Video Solution

166. Shape of the chromosome is determined by :

A. Telomere

B. Centromere

C. Chromomere

D. Centrosome

Answer: B

Watch Video Solution

167. In a bacterial cell, the respiratory enzymes are found in

A. Mitochondria

B. Chondriosome

C. Mesosome

D. Centrosome

Answer: C

Watch Video Solution

168. The cell wall of Spirogyra is made up of

A. Cellulose

B. Suberin

C. Lignin

D. Chitin

Answer: A

Watch Video Solution

169. The main function of Golgi complex is

A. Translocation

B. Phosphorylation

C. Glyco-oxidation

D. Fermentation

Answer: A

Watch Video Solution

170. In cell division, spindle fibers are made up of protein

A. Myoglobin

B. Tubulin

C. Albumin

D. Myosin

Answer: B

Watch Video Solution

171. Choose the incorrect match

A. Nucleus-RNA

B. Lysosome- Protein synthesis

C. Mitochondria- Respiration

D. Cytoskeleton- Microtubules

Answer: B

Watch Video Solution

172. Rough endoplasmic reticulum is associated with

A. Fat synthesis

B. Steroid synthesis

C. Protein synthesis

D. All of these

Answer: C

Watch Video Solution

173. The resolving power of electron microscope is

A. 10

B. 10^5

C. 100^5

D. 1000^5

Answer: B

Watch Video Solution

174. The number of barr bodies in XXXXY is

A. 1

B. 2

C. 3

D. 4

Answer: C

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175. The study related to the structure and function of cell is called as

A. Physiology

B. Cell biology

C. Histology

D. Cytology

Answer: B

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176. Fluid mosaic model was given by

A. Knoll and Ruska

B. Singer and Ruska

C. Singer and Nicolson

D. Bateson and Punnet

Answer: C

Watch Video Solution

177. The characterisitic of blue green algea is

Or

Blue- green algae are called cynobacteria because

A. DNAwithouthistone

B. Nucleus absent

C. Nuclear membrane absent

D. Nuclear membrane absent

Answer: D

Watch Video Solution

178. A plant cell without cell wall is called

A. Etioplast

B. Aleuroplast

C. Amyloplast

D. Protoplast

Answer: D

Watch Video Solution

179. Movement of materials against concentration gradient is due to

A. Osmosis

B. Active transport

C. Diffusion

D. Passive transport

Answer: B

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180. Cell organelle present in both prokaryotic and eukaryotic cells is

A. Ribosome

B. Mitochondria

C. ER

D. Nucleus

Answer: A

Watch Video Solution

181. Centromere is also called

A. Chromomere

B. Secondary constriction

C. Primary constriction

D. Chromonema

Answer: C

 Watch Video Solution

182. In Singer and Nicolson's model of plasma membrane, the extrinsic proteins are

A. Tightly associated with intrinsic protein and can be easily separated

B. Loosely associated with intrinsic protein

C. Loosely associated with intrinsic protein and can be easily separated

D. Loosely associated with intrinsic protein and cannot be easily separated

Answer: C

Watch Video Solution

183. Ribosomes are associated with

A. RNA synthesis

B. Protein synthesis

C. Enzyme mobilization

D. DNA synthesis

Answer: B

Watch Video Solution

184. Which organelle is not found in an animal cell?

A. Peroxysome

B. Ribosome

C. Lysosome

D. None of these

Answer: D

Watch Video Solution

185. Actin fiber is present in

A. Cilia

B. Flagella

C. Carbohydrates

D. Microfilaments

Answer: D

Watch Video Solution

186. Meiosis can be observed in

A. Tapetal cells

B. Megasporese

C. Micropres

D. Spore mother cells

Answer: D

Watch Video Solution

187. Carrier proteins are involved in

A. Transport of enzymes

B. Water transport

C. Active transport of ions

D. Passive transport of gases

Answer: C

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188. The recent model for plasma membrane proposed by Singer and Nicolson is

A. Molecular lipid model

B. Lamellar model

C. Unit membrane model

D. Fluid mosaic model

Answer: D

View Text Solution

189. Main function of mitochondria in a cell is

A. Excretion

B. Respiration

C. Digestion

D. Excretion and respiration

Answer: B

Watch Video Solution

190. Term basal body is associated with the development of

A. Cilia and flagella

B. Cell plate

C. Phragmoplast

D. Kinetochore

Answer: A

Watch Video Solution

191. Golgi body originated from

A. Lysosome

B. Endoplasmic reticulum

C. Mitochondria

D. Cell membrane

Answer: B

Watch Video Solution

192. Lipid molecule in plasma membrane are arranged in

A. Scattered

B. Series

C. Alternate

D. Head parallel

Answer: D

Watch Video Solution

193. The structure of nuclear membrane facilitates

A. Organization of the spindle

B. Synapsis of homologous chromosome

C. Nucleo-cytoplasmic exchange of material

D. Anaphasic separation of daughter chromosome

Answer: C

Watch Video Solution

194. Hydrolytic enzymes — lipases, proteases and carbohydrates are found in

A. Golgi bodies

B. Lysosomes

C. Endoplasmic reticulum

D. Mitochondria

Answer: B

Watch Video Solution

195. Ribosome may also be called

A. Microsome

B. Dictyosome

C. Ribonucleoprotein

D. Oxysomes

Answer: C

Watch Video Solution

196. Genes are present in

A. Chromosomes

B. Lamellae

C. Plasma membrane

D. Mesosomes

Answer: A

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197. The chromosome showing L-shaped structure by the presence of centromere is termed as

A. Acentric

B. Metacentric

C. Sub-metacentric

D. Telocentric

Answer: C

Watch Video Solution

198. Who coined the term "cell" ?

A. Purkinje

B. Robert Brown

C. Robert Hooke

D. Hugo von Mohl

Answer: C

Watch Video Solution

199. A chromosome with centromere near the middle is called

A. Acrocentric

B. Telocentric

C. Metacentric

D. Submetacentric

Answer: C

Watch Video Solution

200. Single membrane bound organelle is

A. Lysosome

B. Plastid

C. Nucleus

D. Mitochondria

Answer: A

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201. Which of the following does not possess lipoprotein- aceous membrane?

A. Lysosomes

B. Lomasomes

C. Ribosomes

D. Sphaerosomes

Answer: C

Watch Video Solution

202. Centrosome is absent in

A. Cells of higher plants

B. Cells of lower plants

C. Cells of higher animals

D. Cells oflower animals

Answer: A

Watch Video Solution

203. Site for protein/peptide synthesis is

A. Ribosome

B. SER

C. Golgi bodies

D. Lysosome

Answer: A

Watch Video Solution

204. To study the living cells without staining, which of the following microscopes can be used?

A. SEM

B. Florescent

C. Phase contrast

D. TEM

Answer: C

Watch Video Solution

205. Molecular biology is the study of

A. Structure, function ,and cell reproduction

B. Physiobiochemical studies of biomolecules

C. Studying tissues under microsope

D. Metabolic activity of life

Answer: B

Watch Video Solution

206. The sub-cellular components can be separated by

A. Paper chromatography

B. Autoradiography

C. Gel electrophoresis

D. Differential and density gradient centrifugation

Answer: D

Watch Video Solution

207. The chromosome separation during meta phase can be best studied by

A. Phase contrast microscope

B. TEM

C. X-ray technique

D. Scanning electron microscope

Answer: A

Watch Video Solution

208. The technique chromatography was developed by

A. Wilkins

B. George Gey

C. Tswett

D. Zernicks

Answer: C

Watch Video Solution

209. Which of the following dye is used for staining cell organelle, mitochondria?

A. Janus Green

B. Safranin

C. Azure B

D. Crystal violet

Answer: A

210. In fluid mosaic model of plasma membrane ,

A. In the fluid mosaic model of plasma membrane

B. Polar layer is hydrophobic

C. Phospholipids form a bimolecular layer m the middle part

D. Proteins form a middle layer

Answer: C

211. According to widely accepted "Fluid mosaic model" cell membranes are semi-fluid, where lipids and integral proteins can diffuse randomly. In recent years, this model has been modified in several repects. In this regard, which of the following statements is incorrect

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

B. Many proteins remain completely embedded within the lipid bilayer.

C. Proteins in cell membranes can travel within the lipid bilayer.

D. Proteins can remain confined within certain domains of the membranes.

Answer: A

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212. Organelle involved in modification and routing of newly synthesised proteins to their destination is

A. Endoplasmic reticulum

B. Lysosome

C. Mitochondria

D. Chloroplast

Answer: A

Watch Video Solution

213. In chloroplasts the chlorophyll is located in

A. Grana

B. Pyrenoid

C. Stroma

D. Both grana and stroma

Answer: A

Watch Video Solution

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

A. The outer membrane resembles a sieve.

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

C. The enzymes of the electron transfer chain are embed- ded in the outer membrane.

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

Answer: C

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215. In germinating seeds fatty acids are degraded exclusively in the

A. Peroxisomes

B. Mitochondria

C. Proplastids

D. Glyoxysomes

Answer: D

Watch Video Solution

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

A. Lysomes are double-membraned vesicles budded off form Golgi apparatus and contain

digestive enzymes.

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

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

D. Sphaerosomes are single membrance bonds and are associated with synthesis and stroage of lipids.

Answer: A

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217. Is 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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218. Which of the following statements regarding cilia is not correct

A. Cilia contain an outer layer of nine doublet microtubules surrounding two single microtubules.

B. The organized beating of cilia is controlled by fluxes of Ca^{2+} across the membrane.

C. Cilia are hair-like cellular appendages.

D. Microtubules of cilia are composed of tubulin.

Answer: B

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219. ATPase enzyme needed for muscle contraction is located in

" " Or

The contractile protein of skeletal muscle involving ATPase activity is

A. Actinin

B. Troponin

C. Tropomyosin

D. Myosin

Answer: D

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Watch Video Solution

220. Select the wrong statement from the following

A. Both chloroplasts and mitochondria contain an inner and outer membrane.

B. Both chloroplast and mitochondria have an internal compartment, the thylakoid space bounded by the thylakoid membrane.

C. Both chloroplasts and mitochondna contam DNA.

D. The chloroplasts are generally much larger than mitochondria.

Answer: B

221. The telomeres of eukaryotic chromosomes consist of short sequences of

A. Cytosine-rich repeats

B. Adenine-rich repeats

C. Guanine-rich repeats

D. Meta phase

Answer: C

Watch Video Solution

222. If you are provided with root-tips of onion in your class and are asked to cont the chromosmes, which of the following stages can your most convenintly look into.

A. Telophase

B. Anaphase

C. Prophase

D. Metaphase.

Answer: D

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223. Protein synthesis in an animal cell occurs

A. On ribosomes present in cytoplasma as well as in mitochodria

B. On ribosomes present in the nucleolus as wen as in cytoplasm

C. Only on ribosomer attached to the nuclear envelope and endoplasmic reticulum

D. Only on the ribosomes present in cytosol

Answer: A

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224. Telomerase is an enzyme which is a

A. RNA

B. Ribonucleoprotein

C. Repetitive DNA

D. Simple protein

Answer: A

 Watch Video Solution

225. The length of DNA molecile greatly exceeds the dimensions of the nucleus in eukaryotic cell. How is this DNA accommodated

A. Deletion of non-essential genes

B. Supper-coiling in nucleosomes

C. DNase digestion

D. Through elimination of repetitive DNA

Answer: B

Watch Video Solution

226. Centromere is rquired for

A. Movement of chromosomes towards poles

B. Cytoplasmic cleavage

C. Crossing over

D. Transcription

Answer: A

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227. Cell junctions called tight , adhering and gap junctions are found in

A. Neural tissue

B. Muscular tissue

C. Connective tissue

D. Epithelial tissue

Answer: D

Watch Video Solution

228. There is no DNA in

A. Hair root

B. An enucleated ovum

C. Mature RBCs

D. A mature spermatozoa

Answer: C

Watch Video Solution

229. A student wishes to study the cell structure under a light microscope having 10X eyepece and 45 X objective. He should illuminate the object by which

one of the following colours of light so as to get the best possible resolution

A. Yellow

B. Green

C. Red

D. Bule

Answer: D

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230. A major breakthrough in the study of cells came with the development of electron microscope. This is

because

A. Electron beam can pass thorugh thick materials, whereas light microscope requires thin section

B. The electron microscope as it uses a beam of electrons which have mavelenght much longer than that of photons.

C. The resolution power of the electron microsope is much higher than that of the light microsope.

D. The resloving power of the electron microscope is 200-350 mn as compared to 0.1-0.2 nm for the light micorospe.

Answer: C

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231. Carrier ions like Na^+ facilitate the absorption of substance like

A. Amino acids and glucose

B. Glucose and fatty acids

C. Fatty acids and glycerol

D. Fructose and some amino acids

Answer: D

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232. The most abundant substance of middle lamella is

A. Cutin

B. Chitin

C. Lignin

D. Pectin

Answer: D

Watch Video Solution

233. In which cell-surface junction fused membrane reveals five-layered structure?

A. Desmosomes

B. Zona occludence

C. Gap-junction

D. Plasmodesmata

Answer: B

Watch Video Solution

234. Which type of cell surface junctions abundantly occur in epithelial tissues?

A. Nexus

B. Desmosomes

C. Zona occludence

D. Plasmodesmata

Answer: B

Watch Video Solution

235. The middle lamella is composed of

A. Pectates

B. Cellulose

C. Lignin

D. Proteins

Answer: A

Watch Video Solution

236. Cell wall is present in

A. Plant cells

B. Prokaryotic cell

C. Fungi cells

D. All the above

Answer: D

View Text Solution

237. Plasma membrane is

A. Selectively permeable

B. Permeable

C. Impermeable

D. Semipermeable

Answer: A

Watch Video Solution

238. Amphipathic molecule in plasma membrane is

A. Protein

B. Carbohydrates

C. Phospholipids

D. All the above

Answer: C

Watch Video Solution

239. The average thickness of plasma membrane is

A. 70Å

B. $75 - 100\text{Å}$

C. $100 - 150\text{Å}$

D. 200Å

Answer: B

Watch Video Solution

240. Unit membrane model of plasmamembrane was proposed by

A. Robertson

B. Singer

C. Danielli

D. Robert Hooke

Answer: A

Watch Video Solution

241. Pit membrane consists of

A. Secondary cell wall

B. Middle lamella

C. Primacy cell wall

D. Plsama membrane

Answer: B

Watch Video Solution

242. Cell wall is made up of

A. Several layers of microfibrils

B. Several micellae

C. Cellulose molecules

D. Glucose molecules

Answer: C

Watch Video Solution

243. Term plasmodesmeta was first used by

A. Glucose molecules

B. De duve

C. Strasburger

D. Porter

Answer: C

Watch Video Solution

244. The type of growth shown by primary cell wall is

A. Intussusception

B. Apposition

C. Intussusception and lignification

D. Mineralization

Answer: A

Watch Video Solution

245. The cells are held together by a Ca- Pectate layer called

A. Primary cell wall

B. Secondary cell wall

C. Middle lamella

D. Tertiary cell wall

Answer: C

Watch Video Solution

246. Cell wall of prokaryotes is made up of

A. Chitin

B. Cellulose

C. Glucose amine

D. Mucopeptide

Answer: D

Watch Video Solution

247. Butter Sandwich model of plasma membrane was proposed by

A. Davson and Danielli

B. Robertson

C. Singer and Nicolson

D. Benson

Answer: A

Watch Video Solution

248. Selective permeability occurs in

A. Cell wall

B. Plasma membrane

C. Cytoplasm

D. None of these

Answer: B

Watch Video Solution

249. Singer and Nicholson's model of plasma membrane differs from Robertson's model in the

A. Number of lipid layers

B. Arrangement of proteins

C. Arrangement of lipid layers

D. Absence of protein layers

Answer: B

Watch Video Solution

250. Ingestion of solid food by plasma membranes is called

A. Endosmosis

B. Pinocytosis

C. Cytokinesis

D. Phagocytosis

Answer: D

View Text Solution

251. Ingestion of large molecules by animal cell is called

A. Diffusion

B. Osmosis

C. Exocytosis

D. Endocytosis

Answer: D

Watch Video Solution

252. Ribosomes are produced in

A. Nucleolus

B. Cytoplasm

C. Mitochondria

D. Golgi body

Answer: A

 Watch Video Solution

253. Which of the following occurs more than one and less than five in a chromosome?

A. Chromatid

B. Centromere

C. Chromomere

D. Telomere

Answer: A

Watch Video Solution

254. Asserition : RBC membrane is higly flexible

Reason: The amount of external protein in the cytoplasmic face of membrane is more.

A. If both Assertion and Reson are true and the Reason is the correct expalanatio of the

Assertion.

B. If both Assertion and Reson are true and the Reason is not the correct explain of the Assertion.

C. If Assertion is true, but Reason is false.

D. If both Assertion and Reason are flase.

Answer: C

Watch Video Solution

255. Assertion : Cells of Zoa reticularis contain large number of SER.

Reason : They are present in adrenal cortex.

A. If both Assertion and Reson are true and the Reason is the correct expalanatio of the Assertion.

B. If both Assertion and Reson are true and the Reason is not the correct explain of the Assertion.

C. If Assertion is true, but Reason is false.

D. If both Assertion and Reason are flase.

Answer: A

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256. Assertion : Centriole does not form any compartment in a cell.

Reason: Centriole is a non-membranous cell organelle.

A. If both Assertion and Reson are true and the Reason is the correct expalanatio of the Assertion.

B. If both Assertion and Reson are true and the Reason is not the correct explain of the Assertion.

C. If Assertion is true, but Reason is false.

D. If both Assertion and Reason are flase.

Answer: A

Watch Video Solution

257. Assertion: Janus green B is a vital stain for locating mitochondria.

Reason :Janus green is oxidized by cytochrome a_2 present in mitochondria.

A. If both Assertion and Reson are true and the Reason is the correct expalanatio of the Assertion.

B. If both Assertion and Reson are true and the Reason is not the correct explain of the Assertion.

C. If Assertion is true, but Reason is false.

D. If both Assertion and Reason are flase.

Answer: B

Watch Video Solution

258. Assertion Lysosmes help in the digestion of foregin particles in the mitochondria .

Reason : They have respiratory enzyme.

A. If both Assertion and Reson are true and the Reason is the correct expalanatio of the Assertion.

B. If both Assertion and Reson are true and the Reason is not the correct explain of the Assertion.

C. If Assertion is true, but Reason is false.

D. If both Assertion and Reason are flase.

Answer: C

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Archives

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

A. Phospholipids

B. Cholesterol

C. Glycolipids

D. Proline

Answer: D

Watch Video Solution

2. Selective the worng statement form the following.

A. The chloroplasts are generally much larger than mitochondria

B. Both chloroplasts and mitochondria contain an inner and an outer membrane

C. Both chlorosphlasts and mitochodria have an internal compartment , the thylakoid space bounded by the thylakoid membrane

D. Both chloroplasts and mitochondria contain DNA

Answer: C

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3. Vacuole in a plant cell

A. Lacks membrane and contains water and excretory substancec

B. Lacks membrane and contains water and excretory substance

C. is membrane and contains storge proteins and lipids

D. is membrane-bound, and contain water and excretory substances.

Answer: D

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

A. magnesium

B. calcium

C. copper

D. maganese

Answer: A

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5. Cellulose is the major component of cell walls of

A. Pseudomonas

B. Saccharomyces

C. Pythium

D. Xanthomonas

Answer: C

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6. Polysome is formed by

A. a ribosome with several subunits

B. ribosomes attached to each other in a liner arrangement

C. Several ribosomes attached to a single mRNA

D. many ribosomers attached to a strand of endoplasmic reticulum.

Answer: C

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7. Keeping in view the fluid mosaic model for the stucture of cell membrane, which one of the following

statements is correct with respect to the movement of lipids and proteins from one lipid mono layer to the other (described as flip flop movement)

A. While proteins can flip-flop, lipids cannot

B. Nethier liqids, nor proteins can filp-flop

C. Both liqids and proteins can flip-flop

D. While liqids can rarely flip-flop proteins Cannot

Answer: D

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8. Middle lamella mainly contains

A. Phosphoglycerides

B. Hemicelluose

C. Muramic acid

D. Calcium pectate

Answer: D

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9. Stroma in the chloroplasts of higher plant cantains

A. Chlorophyll

B. Light-indepents reaction enzymes

C. Light-dependent reaction enzymes

D. Ribosomes

Answer: B

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10. Cytoskelection is made up of

A. Proteinaceous filaments

B. Calcium carbonate granules

C. Callose deposties

D. Cellulose microfibrils

Answer: A

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11. Plasmodesmata are

A. Connection between adjacent cells

B. Lignified cemented layers between cells

C. Locomotory structures

D. Membranes connecting the nucleus with plasmalem- ma

Answer: A

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12. The plasma membrane consists maninly of

A. phosholipids embedded in a protein bilayer

B. proteins embedded in a phospholipid bilayer

C. protems embedded in a polymer of glucose molecules

D. proteins embedded in a carbohydrate bilayer

Answer: B

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

" " Or

Proteins required for functioning of nucleus are formed in

A. Plasma membrane

B. Mitochondrian

C. Cytoplasm

D. Nucleus

Answer: C

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

A. Mitochondria

B. Dictyosome

C. Lysosome

D. Peroxisome

Answer: A

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

" " Or

Cytoplasm of one cell is connected with other through

A. Plasmodesmata

B. Plastoquinones

C. Endoplasmic reticulum

D. Plasmalemma

Answer: A

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

Components :

(i) Cristae of mitochondria

(ii) Inner membrane of mitochondria

(iii) Cytoplasm

(iv) Smooth endoplasmic reticulum

(v) Rough endoplasmic

(vi) Mitochondrial matrix

(vii) Cell vacuole

(viii) Nucleus

The correct components are

A.

	A	B	C	D
(1)	(i)	(iv)	(viii)	(vi)

B.

	A	B	C	D
(2)	(vi)	(v)	(iv)	(iiv)

C.

	A	B	C	D
(3)	(v)	(i)	(i)	(ii)

D.

	A	B	C	D
(4)	(v)	(iv)	(viii)	(iii)

Answer: D

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

A. Endoplasmic reticulum

B. Plasmalemma

C. Cytoskeleton

D. Thylakoid

Answer: C

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

A. Genes

B. Nucleotides

C. Nucleosomes

D. Base pairs

Answer: C

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19. Peptide synthesis inside a cell takes place in

A. Ribosomes

B. Chloroplast

C. Mitochondria

D. Chromoplast

Answer: A

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20. Important site for formation of glycoproteins and glycolipids is

A. Lysosome

B. Vacuole

C. Golgi apparatus

D. Plastid

Answer: C

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21. Given below is a sample of a portion of DNA strand giving the base sequence on the opposite strands. What is so special shown in it ?

$5'\_GAATTC\_3'$

$3'\_CTTAAG\_5'$

A. Palindromic sequence of base pairs

B. Replication completed

C. Deletion mutation

D. Start codon at the 5' end

Answer: A

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22. The correct sequence of cell organelles during photores piration is

A. Chloroplast-Rough endoplasmic reticulum-Dic-tyosomes

B. Chloroplast-Mitochondria-Peroxisome

C. Chloroplast-Vacuole-Peroxisome

D. Chloroplast-Golgi bodies-Mitochondria

Answer: B

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23. 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 ribosome are 80s, whree "S" stands for sedimentation coefficient.

Answer: A

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24. Select of correct statement from the following regarding cell membrane

" " Or

Who proposed "fluid mosaic model" for plasma membrane

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

B. Liqids are arranged in a bilayer with polar heads toward the inner part.

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

D. Na^+ and K ions move across cell

Answer: C

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25. Nuclear membrane is absent in

A. Volvox

B. Nostoc

C. Penicillium

D. Agaricus

Answer: B

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26. Which of the following does not differ in E.coli and Chlamudomonas ?

A. Cell well

B. Cell membrane

C. Ribosomes

D. Chromosomal organization

Answer: B

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27. Ribosomal RNA is synthesized in :

A. Nucleoplasm

B. Nucleoplasm

C. Lysosomes

D. Nucleolus

Answer: D

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28. A major site for synthesis of lipids is

A. RER

B. SER

C. Symplast

D. Nucleoplasm

Answer: B

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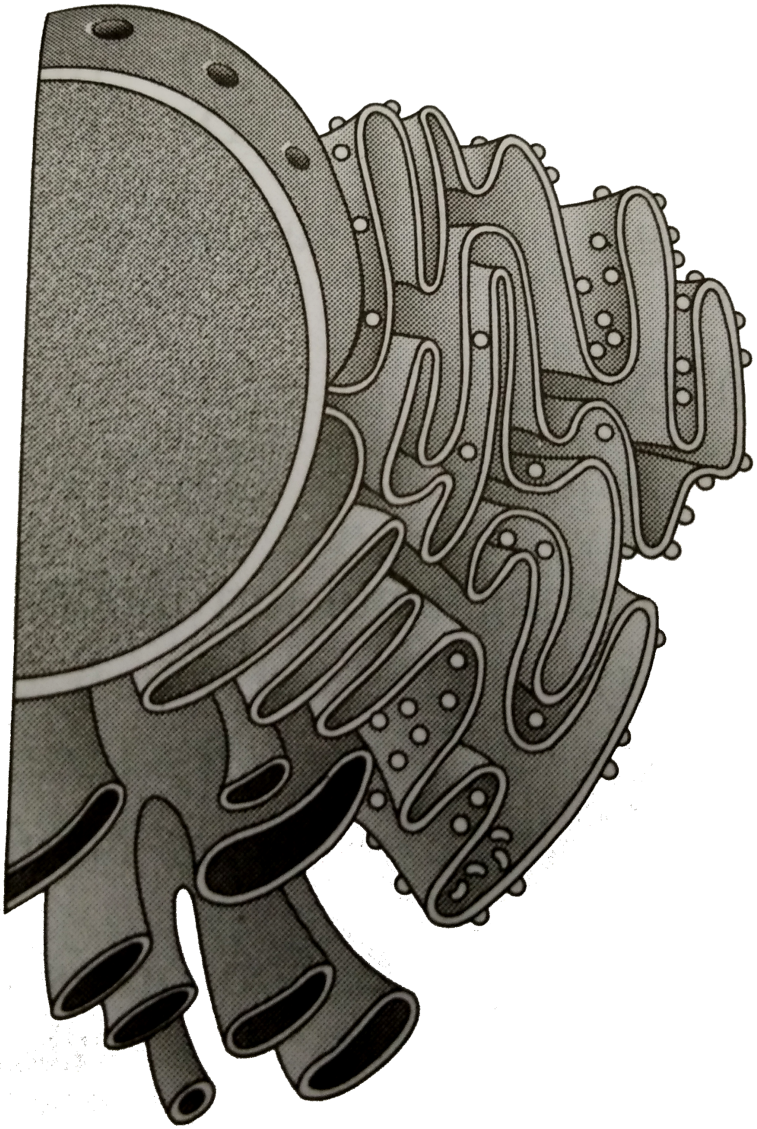
29. Which one of the following organelle in the figure correctly matches with its functions?



A. Rough endopolasmic reticulm, formation of glyco-proteins

B. Golgi apparatus, protein synthesis

C. Golgi apparatus, formation of glycolipids

D. Rough endoplasmic reticulum protein synthesis

Answer: D

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30. Match the following and select the correct answer:

A.

	A	B	C	D
(1)	(iv)	(ii)	(i)	(iii)

B.

	A	B	C	D
(2)	(i)	(ii)	(iv)	(iii)

C.

	A	B	C	D
(3)	(i)	(iii)	(ii)	(iv)

D.

	A	B	C	D
(4)	(iv)	(iii)	(i)	(ii)

Answer: A

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31. Osmotic expansion of a cell kept in water is chiefly regulated by

A. Mitochondria

B. Vacuoles

C. Plasticds

D. Ribosomes

Answer: B

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

A. Microtubule

B. Microfilaments

C. Intermediate filaments

D. Lamina

Answer: A

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33. Which structures perform the function of mitochondria in bacteria

A. Nucleoid

B. Ribosomes

C. Cell wall

D. Mesosomes

Answer: D

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34. Select the correct matching in the following pairs:

A. Rough ER-Oxidation of fatty acids

B. Smooth ER-Oxidation ofphospholipids

C. Smooth ER-Synthesis of lipids

D. Rough ER- Synthesis of glycogen

Answer: C

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

A. Polysome

B. Phosphate granule

C. Cyanophycean granule

D. Glycogen granule

Answer: A

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36. Nuclear envelope is a derivative of

A. Rough endoplasmic reticulum

B. Smooth endoplasmic reticulum

C. Membrane of Golgi complex

D. Microtubules

Answer: A

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37. DNA is not present in :

A. Mitochondria

B. Chloroplast

C. Nucleus

D. Nucleus

Answer: C

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38. Which of the following structure is not found in prokyaryotic cells ?

A. Plasma membrane

B. Nuclear envelope

C. Ribosome

D. Mesosome

Answer: B

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39. Which one of the following are not membrane-bound?

A. Mesosomes

B. Vacuoles

C. Ribosomes

D. Lysosomes

Answer: C

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40. Cellular organelles with membranes are

A. Lysosmes, Golgi apparaus and mitochondria

B. Nuclei, ribosomes and mitochondria

C. Chromosomes, ribsosmes and endoplasmic reticulum

D. Endoplasmic reticulum, ribosomes and nuclei

Answer: A

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41. Cell wall is absent in:

A. Nostoc

B. Aspergillus

C. Funaria

D. Mycoplasma

Answer: D

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42. A protoplast is a cell

A. without cell wall

B. without plasma membrane

C. without nucleus

D. undergoing division

Answer: A

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43. 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)	(b)	(c)	(d)
A.	(1)	(iii)	(iv)	(ii)	(i)
		(a)	(b)	(c)	(d)
B.	(2)	(iv)	(iii)	(i)	(ii)
		(a)	(b)	(c)	(d)
C.	(3)	(iii)	(iv)	(i)	(ii)
		(a)	(b)	(c)	(d)
D.	(4)	(iii)	(ii)	(iv)	(ii)

Answer: C

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44. Balbiani rings are sites of

A. RNA and protein synthesis

B. Lipid synthesis

C. Nucleotide synthesis

D. Polysaccharide synthesis

Answer: A

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45. Mitochondria and chloroplast are

(a) Semi-autonomous organelles

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

Which one of the following options is correct

A. Both (a) and (b) are correct

B. (b) is true but (a) is false

C. (a) is true but (b) is false

D. Both (a) and (b) are false

Answer: C

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46. Microtubules are the constituents of

A. Cilia, Flagella and Peroxisomes

B. Spindle fibres, Centrioles and Cilia

C. Centrioles, Spindle fibres and Chromatin

D. Centrosome, Nucleosome and Centrioles

Answer: B

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47. A complex of attached to a single of RNA is known as

A. Polysome

B. Polymer

C. Polypeptide

D. Okazaki fragment

Answer: A

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

A. Mitochondria

B. Chloroplasts

C. Lysosomes

D. Nuclei

Answer: A

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49. Water soluble pigments found in plant cell vacuoless are

A. Xanthophylls

B. Cholorophylls

C. Carotenoids

D. Anthocyanins

Answer: D

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50. A cell organelle containing hydrolytic enzymes is

A. Ribosome

B. Mesosome

C. Lysosome

D. Microsome

Answer: C