BIOLOGY

BOOKS - UNIVERSAL BOOK DEPOT 1960 BIOLOGY (HINGLISH)

CELLS - THE UNIT OF LIFE

Cells The Unit Of Life

1. Differentiation capacity of compunds microscope is

A. $0.275\mu m$

B. $2.75\mu m$

C. $27.5\mu m$

D. None

Answer: A

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2. A mixture containing DNA fragments a, b, c and d with molecular weigths of $a + b = c, a > b$ and $d > c$, was subjected to agarose gel electrophoresis. The positions of these fragments from cathode to anode sides of the gel would be

A. b,a,c,d

B. a,b,c,d

C. c,b,a,d

D. b,a,d,c

Answer: A

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3. 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. Blue

B. Green

C. Yellow

D. Red

Answer: A

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4. Electron microscope is used for

A. Viewing structure of the cell

B. Whole mount study

C. Cell division study

D. Structure of the pollen grain

Answer: A

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5. A magnification of upto 100 million times is possible in

A. Scanning electron microscope

B. Electron transmission microscope

C. Scanning probe microscope

D. Photon tunneling microscope

Answer: C

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6. Resolving power of light microscope is

A. $0.2\mu m$

B. $0.1\mu m$

C. $2\mu m$

D. $100\mu m$

Answer: A

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7. Electron microscope has revealed the presence of or Which among the following can be seen only under electron microscope

A. Ribosome

B. Chromsome

C. Chloroplast

D. Leucoplast

Answer: A

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8. Who invented the "electron microscope"

A. Knoll and Ruska

B. Robert Brwon

C. Correns

D. Janssen and Janssen

Answer: A

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9. Which of the following statement is/are true

(A)The resolution power of unaided human eye is 100 micrometre

(B) The highest resolution is obtained with the light of shortest wavelength

(C) Dark fiel microscope is most useful for viewing the living cells

(D) In gel filtration chromatography, molecules can be separated in picogram to nanogram quantities

A. A,C and D only

B. B and D only

C. C and D only

D. A, B and D only

Answer: D

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10. 1 nm is equal to

A. 10Å

B. 10^{-3}mm

C. 10^{-8} m

D. $100\mu m$

Answer: A

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11. Resolving power of scanning electron microscope is

A. 5-20 nm

B. $.01nm$

C. $.1nm$

D. $.0001$

Answer: A

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12. Fluidity of bio-membranes can be shown by

A. Electron microscope

B. Tissue culture

C. Phase-contrast microscope

D. Fluorescence microscope

Answer: D

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13. The dry weight of macromolecules like DNA, RNA and proteins can be determined using

A. Fluorescent microscopy

B. Dark field microscopy

C. Phase contrast microscopy

D. Differential interference contrast microscopy

Answer: D

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14. The smallest size of a cell which can be seen with unaided eye is or differentiation capacity of human eye is

A. 1 micron

B. 10 micron

C. 100 micron

D. 1000 micron

Answer: C

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15. Ultrastructure of cell can be best studied by

A. Autoradiography

B. X-ray diffraction method

C. Phase contrast microscope

D. None of these

Answer: D

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16. Which one of the following statements is not true

A. Immersion oil increases the refractive index

B. Fluorescent microscopy uses the normal light to view molecules

C. Electron microscope has only electromagnetic lenses

D. Scanning tunneling microscope is useful in scanning computer chips for defects

Answer: B

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17. Electron microscope is based on principle of

A. Electromagnetic theory

B. Resolution of glass lenses

C. Magnification of glass lenses

D. Refraction of light

Answer: A

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18. The resolving power of a compound microscope will increase with

A. Decrease in wavelength of light and increase in numerical aperture

B. Increase in wavelength of light and decrease in numerical aperture

C. Increase in wavelength of light and numerical aperture

D. Decrease in both wavelength of light and numerical aperture

Answer: A

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

A. Electron beam can pass through thick materials, whereas light microscopy requires thin sections

B. The electron microscope is more powerful than the light microscope as it uses a beam of electrons which has wavelength much longer than that of photons

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

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

Answer: C

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20. With the increase in diameter of the rotor, the effective RCF (relative centrifugal force) at a fixed RPM (revolutions per minute) will

A. Remain unaffected

B. Increase

C. Decrease

D. Be lower at the bottom of centrifuge tube

Answer: B

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21. Electrons used in electron microscope are of the wavelength

A. 0.05 Å

B. 0.15 Å

C. 0.25 Å

D. 0.30 Å

Answer: A

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22. Stain used by Feulgen to stain DNA is

A. Janus green

B. Basic fuschin

C. Crystal violet

D. Methylene blue

Answer: B

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23. Agarose extracted from sea weeds finds use in

A. Gel electrophoresis

B. Spectrophotometry

C. Tissue culture

D. PCR

Answer: A

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24. The distribution of two or more specific molecules within a cell can be studied by using

A. Dark field microscope

B. Flourescent microscope

C. Phase contrast microscope

D. Interference contrast microscope

Answer: B

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25. Microtome was developed by

A. Talbot

B. Brogy

C. Merten

D. W.His

Answer: D

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26. Which of the following techniques is used to extract proteins from the cell fractionation

A. Ultracentrifugation

B. Charomatography

C. Autoradiography

D. Electrophoresis

Answer: A

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27. Detailed structure of the membrane was studied after the advent of electron microscope during

A. 1930' s

B. 1950 's

C. 1970 's

D. 1990' s

Answer: B

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28. Electron microscope is made up of

A. Objective and ocular lenses

B. Polarizer and analyzer filters

C. Electromagnetic lenses

D. Fluorochromes

Answer: C

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29. In confocal microscope, the specimen is illuminated by

A. UV ray

B. Laser beam

C. Electron flow

D. None of these

Answer: B

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30. One micrometer is a unit equivalent to

A. $10^{-3}m$

B. $10^{-6}m$

C. $10^{-9}m$

D. $10^{-12}m$

Answer: B

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31. Which lenses in electron microscope are used to control and focus a

A. Convex lens

B. Concave lens

C. Electric lenses in electron microscope are used to control and focus a

D.

Answer: D

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

" " or

The microscope usually used for seeing living cells or tissues

A. Dark field microscope

B. Phase contrast microscope

C. Polarisation microscope

D. Scanning transmission electron microscope

Answer: B

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33. Following technique uses radioactive precursors for observing metabolic activities of macromolecules, is

" "or

Which of the following technique, other than microscopy is used for study of cell

A. Chromatography

B. Density gradient centrifugation or cell fractionation

C. Autoradiography

D. Electron microscope

Answer: C

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34. Numerical aperture of microscope lens is expressed by

A. Angular aperture only

B. Refractive index only

C. Both angular aperture and refractive index

D. Wave length of the light used

Answer: C

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35. Which of the following is used for staining of lipids

A. Rhodamine

B. Iodine

C. Oil red O

D. Ethidium bromide

Answer: C

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36. Pure fractions of cellular components can be isolated by

A. Chromatography

B. Scanning electron microscopy

C. X-ray diffraction

D. Differential centrifugation

Answer: D

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37. Scientists were able to pinpoint the location of colour processing centres in the visual cortex of the brain by means of

A. PET

B. NMR

C. CT

D. X-ray

Answer: A

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38. Who proposed the "Cell theory"

A. Schleiden (botanist) and Schwann (Zoologist)

B. Watson and Crick

C. Mendel and Morgan

D. Robert Hooke

Answer: A

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39. Which of the following is the exception of cell theory

A. Bacteria

B. Fungi

C. Lichen

D. Virus

Answer: D

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40. Difference between the prokaryotic and eukaryotic cells in having

A. Cell wall

B. Nuclear membrane

C. Ribosome

D. None of these

Answer: B

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41. Intracellular compartments are not found in cells of

A. Lower plants

B. Prokaryotes

C. Higher plants

D. Eukaryotes

Answer: B

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42. How many types of cells are known

A. One

B. Two

C. Three

D. Four

Answer: C

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43. The division of the plant kingdom into Prokaryota and Eukaryota is based on the characters of

A. Nucleus only

B. Chromosomes only

C. Cell organelles only

D. All the these

Answer: D

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44. T. Schwann and M. Schleiden were

A. Dutch biologists

B. English biologists

C. Austrain biologists

D. German biologists

Answer: D

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45. Who proposed the theory that "cells arise only from the pre-existing cells"

A. Mohl

B. Virchow

C. Hacekel

D. Brown

Answer: B

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46. Cytosomes are found in

A. Chloroplasts

B. Bacteria

C. Mitochondria

D. All of these

Answer: D

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

A. Dictyosome

B. Ribosome

C. Mesosome

D. Endoplasmic reticulum

Answer: C

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48. Which of the following forms more than 1/2 of cell

A. Water

B. Mineral

C. Protein

D. Carbohydrate

Answer: A

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49. The smallest living cells with cell wall are

" " Or

Which of the following is a prokaryote

A. Viroids

B. Algae

C. Bacteria

D. Mycoplasma

Answer: C

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50. Which of the following is absent in prokaryotes

A. DNA

B. RNA

C. Plasma membrane

D. Mitochondria

Answer: D

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51. Which one of the following pairs is not correctly matched

A. Cristae " " The "Shelves" formed by the folding of the inner membrane of the mitochondrion

B. Plasmodesmata " "The membrane surrounding the vacuole in plants

C. Grann " " Membrane bound discs in chloroplasts that contain chlorophylls and carrotenoids

D. Middle lamella " " Layer between adjacent cell walls in plants derived from cell plate

Answer: B

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52. The branch deals with the study of cell structure and function is known as

A. Histology

B. Ecology

C. Morphology

D. Cytology

Answer: D

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53. Schleiden (1838) proposed that cell is the structural and functional unit of life. His idea was a

A. Assumption

B. Generalization

C. Hypothesis

D. Observation

Answer: C

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54. The cell organelles are found in

A. Bacterial cells

B. Cyanobacterial cells

C. Prokaryotic cells

D. Eukaryotic cells

Answer: D

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55. The size of most of the cells is best expressed in

A. Å

B. Milimeters (mm)

C. Nanometers (nm)

D. Micrometers (μm)

Answer: D

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56. The word "Prokaryote" means a cell

A. With many nuclel

B. With one nucleus

C. With diffused nucleus

D. Without chloroplast

Answer: C

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57. Robert Hooke used the terms cell in the year

A. 1650

B. 1665

C. 1865

D. 1960

Answer: B

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58. Which of the following is not a cell organelle

A. Mitochondria

B. Ribosome

C. Golgi complex

D. Microsome

Answer: D

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59. Which one is the largest unicellular organism

A. Planaria

B. Volvax

C. Blue green algae

D. Yeast

Answer: D

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60. Smallest known cell is

A. Acetabularia

B. Nostoc

C. Chlamydomonas

D. Pleuropneumonia like organism

Answer: D

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61. The cell theory states that

A. All cells have nuclei

B. All cell are totipotent

C. Cells reproduce by mitosis

D. Cells are the basic structural units of living beings

Answer: D

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62. The main difference between plant and animal cell is

A. Animal cells lack cell wall

B. Plant cell has no cell wall

C. Animal cell has a rigid cell wall

D. Plant cells lack cell membrane

Answer: A

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63. Match the following and choose the correct combination from the options given

Column I	Column II
Robert Hooke	1. Mutation theroy
Charles Darwin	2. Swan-necked flask experiment
Hugo de vries	3. Origin of species
Louis pasteus	4. Mcrographia

A. A-3,B-4,C-1,D-2

B. A-2,B-1,C-3,D-4

C. A-1, B-2, C-3, D-4

D. A-4, B-3, C-1,D-2

Answer: D

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64. Which of the following is absent in prokaryotes

A. Nuclear membrane

B. Golgi bodies

C. Endoplasmic reticulum

D. All the above

Answer: D

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65. 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. Plasmalemma

B. Plasmodesmata

C. Plastoquinones

D. Endoplasmic reticulum

Answer: B

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66. Middle lamella is made up of

A. Cellulose

B. Suberin

C. Calcium and magnesium pectate

D. Lignin

Answer: C

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67. The internal layer joining the primary walls of the two adjacent cells is known as

" " Or

The possibility of being outermost layer of cell is highest for which of the following

A. Plasmodesmata

B. Middle lamella

C. Periderm

D. Casparian strip

Answer: B

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68. The strength and rigidity of a cell wall is due to the substance known as

A. Suberin

B. Cellulose

C. Lignin

D. Pectin

Answer: C

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69. The most abundant substance of middle lamella is

A. Suberin

B. Cutin

C. Lignin

D. Pectin

Answer: D

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70. 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

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71. Plant cell wall consists of

A. Lignin + hemicelluloses + pectin + lipid

B. Lipid + protein + hemicelluloses + pectin

C. Lignin + hemicellulses + pectin + cellulose

D. Lignin + hemicelluloses + tubulin + cellulose

Answer: C

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72. Identify the polysaccharide with β-glycosidic bonds

A. Starch

B. Glycogen

C. Sucrose

D. Cellulose

Answer: D

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73. Cell wall is absent in

A. Gametes

B. Amoeba

C. Mycoplasma

D. All of these

Answer: D

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74. The plant cell wall is made up of cellulose. This is believed to be

A. A liquid

B. A protein

C. A polysaccharide

D. An amino acid

Answer: C

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75. A protoplast is a cell

A. Without nucleus

B. Undergoing division

C. Without cell wall

D. Without plasma membrane

Answer: C

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76. What is the structural element of cell wall

A. Matrix

B. Microtubules

C. Microfibrils

D. Arabinogalactans

Answer: D

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77. In the cell walls of the guard cells, cellulose microfibrils are oriented

A. Radially

B. Transversely

C. Tangentially

D. Obliquely

Answer: A

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78. The chemical substances found most abundantly in the middle lamella is released into the phragmoplast by

A. Endoplasmic reticulum

B. Golgi complex

C. Spindle fragments

D. Interzonal fibres

Answer: B

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79. Which is correct for the structure of cell wall of bacteria and fungi

A. Both are made up of cellulose

B. Both have mucopeptide

C. Both are made up of N-acetylglucosamine

D. None of these

Answer: C

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80. In plants, both cellulose and hemicellulose are major components of which one of the following

A. Plasma membrane

B. Cell wall

C. Nuclear membrane

D. Mitochondrial membrane

Answer: B

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81. The plasma membrane consists maninly of

A. Proteins embedded in a carbohydrate bilayer

B. Phosholipids embedded in a protein bilayer

C. Proteins embedded in a phospholid bilayer

D. Proteins embedded in a polymer of glucose molecules

Answer: C

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82. For cell membrane, name "plasmalermma" was given by

A. Porter

B. Nageli

C. Cramer

D. Plowe

Answer: D

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83. Most abundant Lipid in cell membrane is

A. Phospholipid

B. Starch

C. Oil

D. Sulpholid

Answer: A

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

A. Differentially permeable

B. Impermeable to anthocyanis

C. Permeable to anthocyanins

D. Dead

Answer: B

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85. Which of the following layer is present nearest to plasma membrane in plant cell

A. Secondary wall

B. Middle lamella

C. Primary wall

D. Tonoplast

Answer: A

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86. 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 can not

B. Neither lipids, nor proteins can flip-flop

C. Both lipids and proteins can flip-flop

D. While lipids can rarely flip-flop, proteins can not

Answer: D

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87. Lipid molecule in plasma membrane are arranged in

A. Scattered

B. Series

C. Alternate

D. Head parallel

Answer: D

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

" " Or

Who proposed "fluid mosaic model" for plasma membrane

A. Na^+ and K^+ ions move across cell membrane by passive transport

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

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

D. Fluid mosaic model of cell membrane was proposed by Singer and Nicolson

Answer: D

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89. Ion carriers are located in

A. Nucleus

B. Cell wall

C. Cellular space

D. Plasma membrane

Answer: D

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90. The type of cell juction which facilitates cell to cell communication is

A. Tight junction

B. Adhering junction

C. Gap junction

D. Desmosomes

Answer: C

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91. Desmosomes are concerned with

A. Cell division

B. Cellular excreation

C. Cytolysis

D. Cell adherence

Answer: D

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92. On which surface of cell Donnan equilibrium occur

" " Or

Demosome is a modification of

A. Cell wall

B. Tonoplast

C. Plasma membrane

D. Nuclear membrane

Answer: C

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93. According to the 'Unit membrane model' the thickness of the cell membrane is about

A. 200 nm

B. 7.5 nm

C. 150 nm

D. 1.0 nm

Answer: B

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94. Which of the following does not require carrier molecules during transport through cell membranes

A. Simple diffusion

B. Facilitated diffusion

C. $Na^+ - K^+$ transport

D. Active transport of sugars and amino acids

Answer: A

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95. Which of the following structures controls the transport of the material into and out of living cells or controls permeability

" " Or

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

A. Centrosome

B. Cell membrane

C. Cell wall

D. Ribosome

Answer: B

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96. In eubacteris, a cellular component that resembles eukaryotic cell is

A. Cell wall

B. Plasma membrane

C. Nucleus

D. Ribosomes

Answer: B

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97. Which of the following constituent of biological membrane

A. Phosphoprotein

B. Protein and Phospholipid

C. Phospholipids

D. Cellulose

Answer: B

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98. Plasma membrane helps in

A. Transportation of only water in and out of cell

B. Protein synthesis

C. Osmoregulation

D. Nucleic acid synthesis

Answer: C

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99. The non-membranous structure is

A. Centrioles

B. Ribosomes

C. Nucleolus

D. All of these

Answer: D

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100. Single membrane bound organelles are

A. Lysosome

B. Sphaerosome

C. Glyoxysome

D. All of these

Answer: D

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

A. Cholesterol

B. Glycolipids

C. Proline

D. Phospholipids

Answer: C

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

A. Macula adherens

B. Zonula adherens

C. Zonula occludens

D. Nexus

Answer: C

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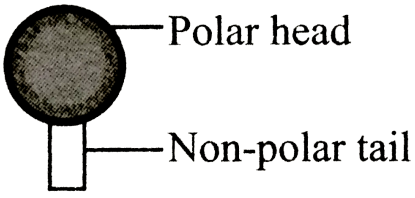
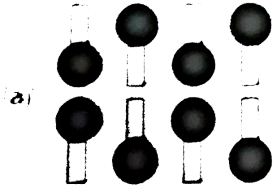
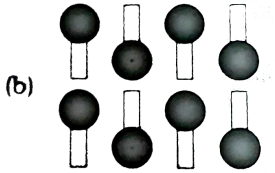
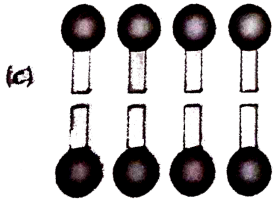
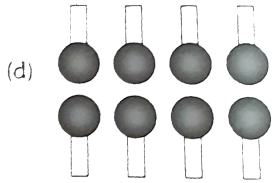
103. The lipid molecules present in plasma membrane have polar heads and non-polar tails (as shown in figure). Which option represents the correct arrangement of lipids in lipid bilayer ?



A. 

B. 

C. 

D. 

Answer: C

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104. Bulk drinking of fluid by cells is termed as

" " Or

The process of sucking of fluid from the cell surface is called

A. Phagocytosis

B. Pinocytosis

C. Cyclosis

D. Osmosis

Answer: B

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105. Thickness of plasma membrane is

A. 10 Å to 30 Å

B. 30 Å to 50Å

C. 50 Å to 70 Å

D. 70 Å to 100 Å

Answer: D

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106. The process of cell eating is called

A. Pinocytosis

B. Phagocytosis

C. Endocytosis

D. Exocytosis

Answer: B

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107. 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 membrane

D. Many proteins remain completely embedded within the lipid bilayer

Answer: B

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108. Which is the latest model that is proposed to explain the structure of plasma membrane

A. Fluid mosaic model

B. Molecular model

C. Unit membrane model

D. None of the above

Answer: A

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109. According to mosaci model, plasma membrane is made up of

A. Cellulose and hemicellulose

B. Phospholipid and intergrate protein

C. Phospholipid, extrinstic and intrinsic protein

D. Phospholipid and hemicellulose

Answer: C

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110. Losmasomes are found in

A. Algal cell

B. Fungal cell

C. Yeast

D. E. coli

Answer: B

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

A. Number of lipid layers

B. Arrangement of lipid layers

C. Arrangement of proteins

D. Absence of protein in Singer and Nicholson's model

Answer: C

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112. Carbohydrates are present in the plasmalemma in the form of

A. Starch

B. Cellulose

C. Hemicellulose

D. Phospholipids (glycolipids) and phosphoproteins (glycoproteins)

Answer: D

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113. Match the following items in column-I with those in column-II and choose the correct answer

Column-I		Column-II	
P.	Plasma membrane mainly contains	i.	Hemicellulose
		ii.	Calcium pectate
Q.	Middle lamella mainly composed of	iii.	Proteinaceous filaments
		iv.	Proteins embedded in phospholipid bilayer

A. P-ii, Q-i

B. P-I, Q-ii

C. P-iv, Q-ii

D. P-iii, Q-iv

Answer: C

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114. The name 'protoplasm' was given by

A. Purkinje

B. Hooke

C. A.K. Sharma

D. Schwann

Answer: A

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115. Both plants and animals are provided with

A. Cell wall

B. Golgi body

C. Chloroplast

D. Protoplasm

Answer: D

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116. Ribonucleoprotein particles of protoplasm are

A. Ribosomes

B. Plastid

C. Golgi body

D. Cristae

Answer: A

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117. The amount of which of the element is greatest in protoplasm

A. Hydrogen

B. Oxygen

C. Nitrogen

D. Carbon

Answer: B

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118. Normal pH of Protoplasm is

A. 7.8

B. 6.8

C. 5

D. 6.5

Answer: B

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119. Cyclosis is

A. Circular movement of cytoplasm inside the cell

B. Up and down movement of protoplasm

C. To and fro movement of nucleoplasm

D. None of the above

Answer: A

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

A. Purkinje

B. Strasburger

C. Brown

D. Flemming

Answer: B

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121. In higher plants, continuity of cytoplasm from one cell to its neighbouring cells to its neighbouring cells is established through

A. Apoplast

B. Chloroplast

C. Leucoplast

D. Symplast

Answer: D

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122. Protoplasm is a

A. True solution

B. Suspension

C. Emulsion

D. Polyphasic colloidal system

Answer: D

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123. The substance which makes up about 80 % of cytoplasm and has unique structure

A. Proteins

B. Fats

C. Minerals

D. Water

Answer: D

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

" " Or

Proteins required for functioning of nucleus are formed in

A. Nucleus

B. Plasma membrane

C. Mitochondrian

D. Cytoplasm

Answer: D

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125. Protein synthesis in an animal cell, takes place

A. Only in the cytoplasm

B. In the cytoplasm as well as in mitochondria

C. In the nucleolus as well as in the cytoplasm

D. Only on ribose attahed to nucleon

Answer: B

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

A. Huxley (1868)

B. Corti (1772)

C. Harby (1899)

D. Malphighi (1903)

Answer: A

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127. Who observed the "mitochondria " first

A. Kolliker

B. Robert Brwon

C. Robert Hooke

D. Altmann

Answer: A

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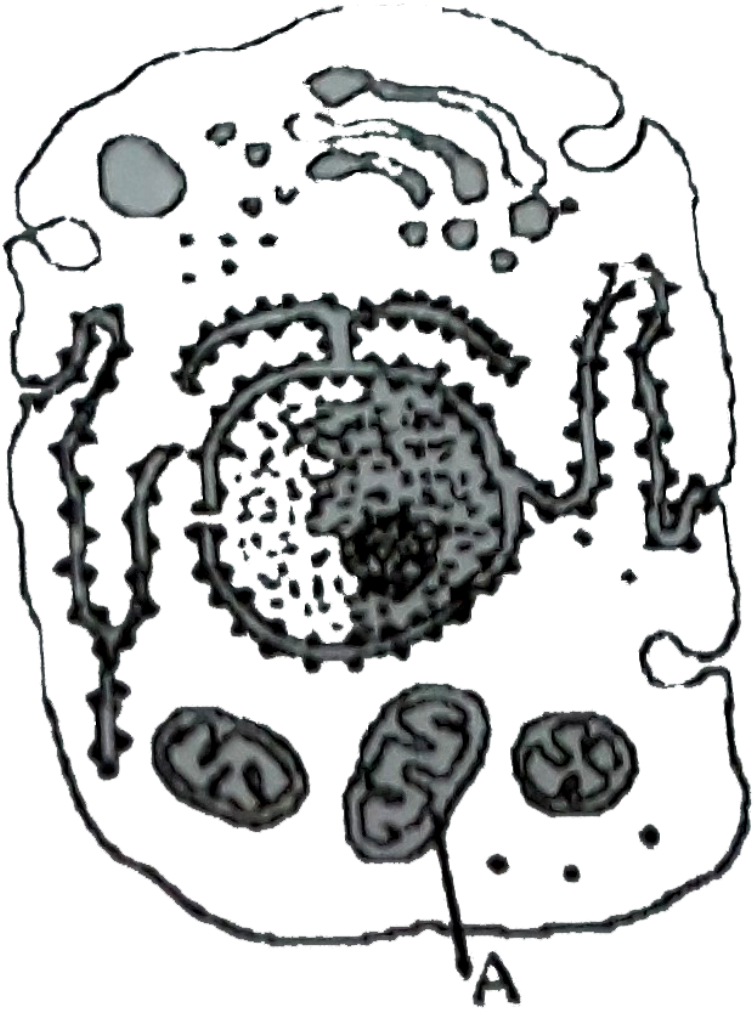
128. Select the alternative giving correct identification and function of the organelle 'A' in the diagram



A. Mitochondria- produce cellular energy in the form of ATP

B. Golgi body- provides packaging material

C. Lysosomes - secrete hydrolytic enzymes

D. Endoplasmic reticulum - synthesis of lipids

Answer: A

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129. Mitochondria perform all of the following functions except

A. Nucleic acid synthesis

B. β - oxidation of fatty acids

C. ATP synthesis

D. Polysaccharide degradation

Answer: D

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130. In mitochondria, protons accumulate in the

A. Intermembrane space

B. Matrix

C. Outer membrane

D. Inner membrane

Answer: A

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131. Prokaryotic origin of mitochondria was proposed by

A. Rabinowitch

B. Altmann and Schimper

C. Salton

D. Morrison

Answer: B

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132. Mitochondria are related to

A. Prokaryotes

B. Plasmids

C. Plastids

D. Viruses

Answer: C

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133. F_1 particles/ oxysome/ elementary particles are present in

A. Endoplasmic reticulum

B. Chloroplast

C. Mitochondria

D. Golgi complex

Answer: C

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134. The number of mitochondria increases in cells of

A. Dormant seeds

B. Germinating seeds

C. Dry seeds

D. Dead seeds

Answer: B

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135. In prokaryotes, the mitochondria are absent. Even then Kreb's cycle takes place. What is the site of Kreb's cycle in bacteria

A. Ribosomes

B. Nucleoid

C. Cytoplasm

D. Mesosomes

Answer: D

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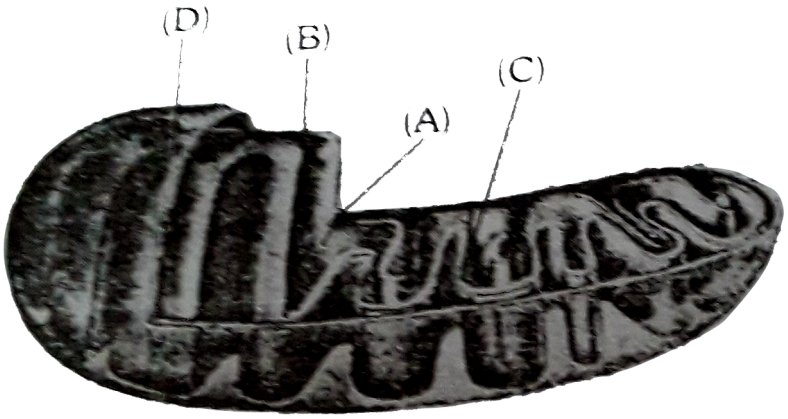
136. The figure below shows the structure of a mitochondrion with its four parts labelled (A), (B), (C) and (D). Select the part correctly matched with its function



A. Part (C) : Cristae - possess single circular DNA molecule and ribosomes

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

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

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

Answer: D

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137. What is mitoplast

A. Membraneless mitochondria

B. Another name of mitochondria

C. Mitochondria without outer membrane

D. Mitochondria without inner membrane

Answer: C

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138. Rackers particles are found in

" " Or

Fernandez Morgan particles are seen in

A. Chromosome

B. Mitochondria

C. Nucleus

D. Gogibody

Answer: B

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139. Folding of inner membrane of mitochondria are called

A. Cristae

B. Grana

C. Calcium oxalate crystals

D. Sacs

Answer: A

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140. Organelles which are regarded as 'Power house' of the cell and in which the oxidaitve reactions of the respiratory process takes place are " " Or

Which of the following cell organells is responsible for extracting energy from Carbohydrates to from ATP

A. Chloroplast

B. Ribosomes

C. Endoplasmic reticulum

D. Mitochondria without inner membrane

Answer: D

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141. Who first introduced the term 'mitochondrion'

A. Kolliker

B. Robert Brwon

C. Benda

D. Altman

Answer: C

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142. Which of the following cell organelle is considered to be rich in catabolic enzymes

" " Or

Respiratory and oxidative enzymes are present in

" " Or

Highest number of enzyme is found in

A. Endoplasmic reticulum

B. Lysosome

C. Golgi body

D. Mitochondria

Answer: D

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143. In which of the following parts of mitochondria, succinic dehydrogenase enzyme is located

" " Or

In mitochondria, enzyme cytochrome oxidase is present in

A. Outer membrane

B. Inner membrane

C. Perimitochondrial space

D. Matrix

Answer: B

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144. The crisate of mitochondria possess

A. Oxysomes

B. Peroxisomes

C. Nucleosomes

D. Quantasomes

Answer: A

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145. Mitochondria are non-existent in

A. Red algae

B. Some bacteria

C. Green algae

D. Brown algae

Answer: B

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146. Mitochondria supply most of the necessary biological energy be

A. Breaking down of sugar

B. Oxidizing substrates of TCA cycle

C. Reducing NADP

D. Breaking down of protein

Answer: B

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147. The size of mitochondria in plant cell is

A. $0.1 - 1.0\mu m$ long

B. $1.0 - 4.0\mu m$ long

C. $2.0 - 4.0\mu m$ long

D. $3.0 - 4.0\mu$m long

Answer: B

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

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

B. The outer membrane resembles as 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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149. Which one of the following human cells does not contain mitochondria

A. Nerve cell

B. Red blood cell

C. Liver cell

D. White blood cell

Answer: B

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150. Autonomic genome system is present in

A. Ribosomes and choroplasts

B. Mitochondria and ribosomes

C. Mitochondria and chloroplasts

D. Golgi bodies and mitohondria

Answer: C

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

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

B. Glycolysis occurs in mitochondria and chloroplast both

C. ATP is produced in mitochondria and chloroplast both

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

Answer: A

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152. Centre of phosphorylation

A. Peroxisome

B. Oxysome

C. Ribosome

D. Mitochondria

Answer: B

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153. In which part of mitochondria, ATPis generated

A. Matrix

B. Cristae

C. Outer membrane

D. F_1 particles (oxysomes)

Answer: D

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154. The reaction of ATP formation is

A. Exergonic

B. Endergonic

C. Spontaneous

D. Reversible

Answer: B

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155. Identify the membrane across which the prton $\left(H^{+}\right)$ gradient facilitates ATP synthesis in a typical eukaryotic cell

A. Plasma membrane

B. Mitochondrial inner membrane

C. Mitochondrial membrane

D. Nuclear membrane

Answer: B

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156. Mitochondria are semi autonomous as they posses

A. DNA

B. DNA + RNA

C. DNA + RNA + ribosomes

D. Protein

Answer: C

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157. Which of the following is correct pair

A. DNA synthesis - Ribosomes

B. Protein synthesis - Smooth E.R.

C. Aerobic respiration - Cristae

D. Suicidal sacs - Dictyosomes

Answer: C

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158. Mitochondria are the site for

A. Photophosphorylation

B. Oxidative phosphorylation

C. Transpiration

D. Carboxylation

Answer: B

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159. Cell organelles found only in plants

A. Golgi complex

B. Mitochondria

C. Plastids

D. Ribosomes

Answer: C

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160. Green pigment (Chlorophyll) present in plants is

A. Chromoplast

B. Chloroplast

C. Ribosome

D. Lysosome

Answer: B

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161. The bright colours of ripe fruits are due to

" " Or

Which of the following type of plastids does not contain stored food material

A. Leucoplasts

B. Chloroplasts

C. Amyloplasts

D. Chromoplasts

Answer: D

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162. Plant cell differ from animal cell because of

A. The presence of cell wall and absence of chlorophyll in plant cell

B. The presence of cell wall and chlorophyll in plant cell

C. The absence of cell wall and presence of chloroplast in animal cell

D. The absence of cell wall and presence of chlorophyll in plant cell

Answer: B

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163. In which plastids are not found

A. Blue green algae

B. Bacteria

C. Fungi

D. All of the above

Answer: D

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164. Which of the following organelles is bounded by two unit membranes

A. Golgi complex

B. Peroxisome

C. Chloroplast

D. Lysosome

Answer: C

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165. What is common between chloroplasts, chromoplasts and leucoplasts

A. Presence of pigments

B. Possession of thylakoids and grana

C. Storage of starch, proteins and lipids

D. Ability to multiply by a fission - like process

Answer: D

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

A. Thylakoids-flattened membranous sacs forming the granna of chloroplasts

B. Centrioles-sites for active RNA synthesis

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

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

Answer: A

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167. Thylakoids are constituents of

A. Chloroplasts

B. Mitochondria

C. ER

D. Ribosmes

Answer: A

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168. In higer plants, the shape of the chloroplast is

A. Discoid (Lens)

B. Cup-shaped

C. Girdle-shaped

D. Reticulate

Answer: A

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169. From the following , select the statement that is true

A. All cells have a cell wall

B. Animal cells contain microtubules but plant cells do not contain microtubules

C. The Golgi apparatus is found only in animal cells

D. Chloroplasts are found in plant cells but not in prokaryotic or animal cells

Answer: D

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170. The chloroplasts of algae usually lack

A. Grana

B. Pigments

C. Protein

D. Lamellae

Answer: A

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171. Aleuroplasts in cell store

A. Starch

B. Oil

C. Protein

D. Nutrients

Answer: C

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172. Plant cells differ from animal cells in having

A. Centrosome

B. Golgi body

C. Vacuole

D. Plasitd

Answer: D

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173. Select the wrong statement from the following

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

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

C. Both chloroplasts and mitcohondria contain DNA

D. The chloroplasts are generally much larger than mitochondria

Answer: B

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174. In chloroplasts, chlorophyll is present in the

A. Thylakoids

B. Stroma

C. Outer membrane

D. Inner membrane

Answer: A

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175. The term chromatophore was coined by

A. Schmitz

B. Comparethi

C. W. Pfeffer

D. Singer and Nicolsan

Answer: A

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176. Quantasomes are found in

A. Mitochondria

B. Chloroplast

C. Lysosome

D. Endoplasmic retiuculum

Answer: B

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177. The main difference between chlorophyll 'a' and 'b' is

A. Chlorophyll 'a' is linear chain compound and 'b' is branched chain

B. Chlrophyll 'a' has no Mg^+ ion in centre of molecule

C. In chlorophyll 'a' there is CH_3 group whereas in 'b' it is - CHO group

D. All of the above

Answer: C

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178. In land plants the guard cells differ from other epidermal cells in having

A. Chloroplasts

B. Cytoskeleton

C. Mitochondria

D. Endoplasmic reticulum

Answer: A

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179. Match Column - I with Column -II and select the correct option

Column -I	Column-II
Cup shaped	1. Ulothrix
Girdle shaped	2. Oedogonium
Stellate	3. Chlamydomonas
Reticulate	4. Zygnema

A. A-2, B-4, C-3, D-1

B. A-3, B-1, C-4, D-2

C. A-3, B-4,C-2,D-1

D. A-4, B-3, C-1,D-2

Answer: B

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180. Water soluble yellowish pigment present in petals of Dahlia is

A. Carotene

B. Xanthophyll

C. Anthoxanthin

D. Anthocyanin

Answer: C

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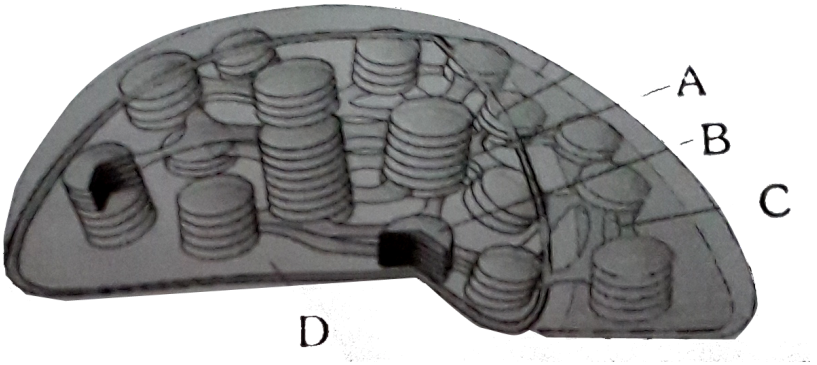
181. Examine the section view of chloroplast showing the different parts



In which of the following options all the four blanks A, B, C and D are correctly identified

A. A- Granum, B- Thylakoid, C - Stroma, D- Stromal lamella

B. A- Thylakoid, B - Granum, C- Stromal lamella, D- Stroma

C. A- Granum, B -Thylakoid, C- Stromal lamella, D- Stroma

D. A - Thylakoid, B - Stromal lamella, C- Stroma, D- Granum

Answer: C

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182. Stroma is the ground material of material of which of the following.

A. Lysosomes

B. Ribosomes

C. Chloroplasts

D. Mitochondria

Answer: A

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183. The amyloplasts look like

A. Proplastids

B. Elioplast

C. Aleuroplast

D. Chloroplat

Answer: A

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184. Which of these is mis- match

A. Amyloplasts - Store protein granules

B. Elaioplasts - Store oils or fats

C. Chloroplasts - Contain chlorophyll pigments

D. Chromoplasts - Contain coloured pgiments other than chlorophyll

Answer: C

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185. Red colour of tomato is due to

A. β- carotene

B. Anthocyanin

C. Lycopene

D. Erythrocyanin

Answer: A

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186. When green tomatoes fruits turn to red, then

A. Chloroplasts are disintegrated and get converted into chromoplasts

B. New chromoplasts are formed

C. Chromoplasts are changed to chloroplasts

D. None of the above

Answer: A

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187. Extranuclear DNA in the cytoplasm is found inside

A. Chloroplast/Mitochondria

B. Ribosome

C. Endoplasmic reticulum

D. Golgi apparatus

Answer: D

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188. All plastids have essentially same structure because

A. They have to perforem same function

B. They are localized in aerial parts of plant

C. All plastids store starh, lipid and proteins

D. One types of plastids can be differentiated into another type of plastid depending on cell requirements

Answer: D

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189. Chromoplast may be of

A. Orange colour

B. Red colour

C. Yellow colour

D. All the above

Answer: C

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190. The thylakoid in chloroplast are arranged as

A. Interconnected disc

B. Interconnected sacs

C. Stacked discs

D. None of these

Answer: D

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

A. Plasma membrane

B. Cytoskeleton

C. Mitochondria

D. Plastids

Answer: D

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

A. Peroxisomes

B. Chloroplasts

C. Mitochondria

D. Golgi complexes

Answer: D

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193. Which type of membrane is most abundant withing a cell

A. ER membrane

B. Nuclear membrane

C. Golgi membrane

D. Plasma membrane

Answer: A

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194. The transfer vesicle from RER fuse with which region of golgi complex

A. Cis

B. Medial

C. Trans

D. Protein arms

Answer: A

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195. Nuclear envelope is a derivative of

A. Membrane of Golgi complex

B. Microtubules

C. Rough endoplasmic reticulum

D. Smooth endoplasmic reticulum

Answer: C

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196. Endoplasmic reticulum is more dveloped in

A. Green cells

B. Young cells

C. Mature cells

D. Bacteriophage

Answer: B

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197. An interconnecting membranous network of the cell composed of vesicles, flattened sacs and tubules is

" " Or

Nuclear membrane is formed around the groups of daughter chromosomes during the telophase by

A. Nucleus

B. Mitochondrion

C. Endoplasmic reticulum

D. Lysosome

Answer: C

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198. See the figure and identify it

A. RER

B. GB

C. SER

D. None

Answer: B

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199. Important site for formation of glycoproteins and glycolipids is

A. Lysosome

B. Vacuole

C. Golgi apparatus

D. Plastid

Answer: C

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200. The most important function of endoplasmic reticulum is

A. Protein synthesis

B. Nourishing the nucleus

C. Secretion of materials

D. To give shape to the cell

Answer: A

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201. In rapidly dividing cells, endoplasmic reticulum is

A. Highly developed

B. Poorly developed

C. Absent

D. Non-functional

Answer: B

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202. Main function of dictyosomes is

A. Respiration

B. Storage

C. Secretion

D. Breakdown of fats

Answer: C

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203. In endoplasmic reticulum the following process take place

A. Lipid synthesis

B. Channeling of biosynthetic processes

C. Steroid synthesis

D. All of the above

Answer: D

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204. Mechanical support, enzyme ciruclation, protein synthesis and detoxification of drugs are function of

" " Or

Which of the following is related to glycosylation of protein

A. ER

B. Ribosomes

C. Dictyosomes

D. Chloroplast

Answer: A

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205. The endoplasmic reticulum often bears

A. Lysosomes

B. Centrioles

C. Peroxisomes

D. Ribosomes

Answer: D

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206. When the region of endoplasmic reticulum are studded by ribosome on their outer surface of the cisternae, it is called

A. Sarcoplasmic reticulum

B. Smooth endoplasmic reticulum

C. Granular endoplasmic reticulum

D. None of the above

Answer: C

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207. The cisternae that make up the Golgi complex are

A. Rough

B. Polarized

C. Non-polarized

D. Reticulate

Answer: B

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208. The endoskeleton of cell is made up of

A. Cell wall

B. Endoplasmic reticulum

C. Cytoplasm

D. Mitochondria

Answer: B

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209. "Endoplasmic reticulum" was discovered by

A. Porter

B. Altmann

C. Golgi

D. Benda

Answer: A

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210. RER is mainly concerned with

A. Proteolysis

B. Fatty acids synthesis

C. Peptide bond formation

D. Cholesterol synthesis

Answer: C

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211. Which organelle is present in higher number in secetry cells

" " Or

One of the following serves as a temporary storage place for proteins and other compounds synthesized by endoplasmic reticulum

A. Dictyosome

B. ER

C. Lysosome

D. Vacuole

Answer: A

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212. Endoplasmic reticulum is in continuation with

A. Golgibody

B. Nuclear wall

C. Mitochondria

D. Cell wall

Answer: B

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213. Golgi body originated from

A. Lysosome

B. Endoplasmic reticulum

C. Mitochondria

D. Cell membrane

Answer: B

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214. Which is not function of golgibody

A. Secretion

B. Formation of plasmamembrane

C. Fat synthesis

D. Cell wall formation

Answer: C

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215. 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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216. In plant cells the number of golgi bodies increases during

A. Cell division

B. Food synthesis

C. Translocation

D. Respiration

Answer: A

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217. The golgi apparatus contains

A. DNA

B. RNA

C. Phospholipids, proteins, enzymes and vitamin C

D. Protein-lipid-protein.

Answer: C

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218. 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
v	iv	$viii$	iii

B.

A	B	C	D
i	iv	$viii$	vi

C.
A	B	C	D
vi	v	iv	vii

D.
A	B	C	D
v	i	iii	ii

Answer: A

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219. Golgi bodies are absent in

A. Plants

B. Bacteria

C. Animals

D. Eukaryotic cells

Answer: B

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220. The Golgi complex plays a major role

A. In post translational modification of proteins and glycosidation of lipids

B. In trapping the light and transforming it into chemical energy

C. In digesting proteins and carbohydrates

D. An energy tranferring organelles

Answer: A

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221. Secretory and membrane proteins are processed in

A. Peroxisomes

B. Glyoxysomes

C. Golgi complex

D. Sphaerosomes

Answer: C

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222. The Golgi complex participates in

A. Fatty acid breakdown

B. Formation of secretory vesicles

C. Respiration in bacteria

D. Activation of amino acid

Answer: B

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

A. Protein folding

B. Protein glycosylation

C. Cleavage of signal petide

D. Phospholipid synthesis

Answer: D

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224. "Lysosomes" were discovered by

A. Haekel

B. De Duve

C. De Vries

D. Purkinje

Answer: B

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225. Which of the following statements is incorrect with reference to lysosomes

A. They are filled 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, nuclei acids, lipids and polysaccharides

Answer: B

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226. The element responsible for the ring structure of chlorophyll and manintenance of ribosome structure is

A. Ca^{++}

B. Mg^{2}

C. S

D. K^{+}

Answer: B

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

A. Magnesium

B. Calcium

C. Copper

D. Manganese

Answer: A

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228. What would happen if lysosomes get ruptured inside the cells in which they are present

A. Cells will swell

B. Cell will shrink

C. Cells will die

D. Nothing would happen

Answer: C

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

A. Lysosomes are double membraned vesicles budded off from golgi apparatus and contain digestive enzymes

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

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

D. Sphaerosomes are single membrane bound and are associated with synthesis and storage of lipids

Answer: A

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230. Match List I and List II and select the correct answer using the code given below the list :

List I		List II	
a	Lysosome	1	Bacteria without cell walls
b	Mycoplasma	2	A virus that infects bacterial cells
c	Thylakoid	3	Flattened sacs in a chloroplast
d	Bacteriophage	4	A vesicle in which hydrolytic enzymes are stored

A. $\begin{matrix} a & b & c & d \\ 3 & 1 & 2 & 4 \end{matrix}$

B. $\begin{matrix} a & b & c & d \\ 4 & 1 & 3 & 2 \end{matrix}$

C. $\begin{matrix} a & b & c & d \\ 2 & 3 & 4 & 1 \end{matrix}$

D. $\begin{matrix} a & b & c & d \\ 1 & 4 & 2 & 3 \end{matrix}$

Answer: B

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231. Ribosome may also be called

A. Microsome

B. Dictyosome

C. Ribonucleoprotein

D. Oxysomes

Answer: C

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232. Lysosomes are so called because these contain

A. Carboxylating enzymes

B. Respiratory enzymes

C. Oxidizing enzymes

D. Digestive enzymes

Answer: D

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

" " Or

Acid hydrolase is found in

A. Centrioles

B. Chromoplasts

C. Lysosomes

D. Chloroplasts

Answer: C

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

" " Or

The largest subunit of prokaryotic ribosomes is

A. 50 S

B. 70 S

C. 30 S

D. 60 S

Answer: A

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235. The functional unit in the synthesis of protein is

A. Peroxisome

B. Dictyosome

C. Lysosome

D. Polysome

Answer: D

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

" " Or

Which of the following cell organelle lacks DNA and bounding membrane

A. Ribosome

B. Peroxisome

C. ER

D. Mesosome

Answer: A

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237. The cell organelle showing extensive polymosrphism is

A. Dictyosomes

B. Chloroplasts

C. Lysosomes

D. Ribosomes

Answer: C

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238. Lysosomes are known as suicidal bags because of

" " Or

Which one of the following is stored in lysosoome

A. Catalytic enzymes

B. Hydrolytic enzymes

C. Parasitic on nucleus

D. Proteolytic enzymes

Answer: B

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239. Ribosomes that occur exclusively in mitochondria is

A. 70S

B. 55S

C. 30S

D. 50S

Answer: B

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240. The "marker" enzyme of lysosome is

A. Lysozyme (muramidase)

B. Acid protease

C. Acid phosphatase

D. Bet-galactosidase

Answer: C

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

A. Mitochondria

B. Endoplasmic reticulum

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

D. Nucleus

Answer: C

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242. Peptide synthesis inside a cell takes place in

A. Ribosomes

B. Chloroplast

C. Mitochondria

D. Chromoplast

Answer: A

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243. Which of the following cell organelles is having single layered unit membrane

" " Or

In active leaf cells, the double membrane is absent in

A. Centrosome

B. Lysosome

C. Mesosome

D. Nucleus

Answer: B

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244. Who discovered "ribosomes" in animal cells

A. Watson

B. Talvim

C. Cowdry

D. Palade

Answer: D

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245. Ribosomes, similar to those of bacteria, are found in

A. Plant nuclei

B. Pancreatic mitochondria

C. Liver endoplasmic reticulum

D. Cardiac muscle cytoplasm

Answer: B

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246. Which of the following statements is wrong for ribosomes

A. Formed by two-sub units

B. Formed by ribo-protein

C. Formed in chain

D. Both sub-units are bounded by a membrane

Answer: D

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247. Ribosomes of bacteria, mitochondria, prokaryotes (Nostoc) and chloroplast are of

A. 50 S type

B. 80 S type

C. 70 S type

D. 30 S type

Answer: C

Watch Video Solution

248. All are membrane bound cell organelles except

" Or

Which of the following cell organelles lacks a unit membrane

A. Mitochondria

B. Lysosomes

C. Sphaerosomes

D. Ribosomes

Answer: D

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249. The 80S ribosomes are present in

A. Eucaryotic cells

B. Procaryotic cells

C. Bacterial cells

D. Cyanobacterial cells

Answer: A

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250. Lysosomes have acidic environment inside their vesicles due to

A. Production of carboxylate ions inside it

B. Production of phosphate ions inside it

C. High pH compared to outside

D. None of the above

Answer: D

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251. Polyribosomes are aggregation of

A. Ribosomes and rRNA

B. Only rRNA

C. Peroxisomes

D. Several ribosomes held together by a stearing of mRNA.

Answer: D

Watch Video Solution

252. The site of protein synthesis in plants is the

" " Or

Which of the following organelle is called as "protein factory of the cell"

A. Chloroplast

B. Ribosomes

C. Pyrenoids

D. Mitochondria

Answer: B

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253. The cell organelle associated with intercellular digestion of macromolecules is

" " Or

Which is concerned with autolsis

" " Or

One of the cell organelle is said to function as "trigger of cell division"

A. Lysosome

B. Peroxisome

C. Polysome

D. Dictyosome

Answer: A

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254. Most of the hydrolytic enzymes of lysosome function at

A. Acidic pH

B. Alkaline pH

C. Neutral pH

D. Both (b) and (c)

Answer: A

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255. Ribosomes are found in

A. Cytoplasm

B. Nucleus

C. Cell wall

D. Golgibody

Answer: A

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256. Heterophagosome is

A. Formed by funsion of food containing phagosome with primary lysosome

B. A newly pinched out vescile from Golgi apparatus which fuses with endosome to become fully functional

C. Formed by fusion of primary lysosome with degenerating intracellular organelles

D. A lysosome in which only indigestible food material is left

Answer: A

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257. Which of the following is responsible for the origin of lysosome

A. Chloroplast

B. Mitochondria

C. Golgi body

D. Ribosome

Answer: C

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258. Ribosomes are made up of

A. DNA and protein

B. DNA alone

C. RNA and protein

D. RNA and DNA

Answer: C

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259. 70S type of ribosome shows two units whose sedimentation constants are

" " Or

Sub unit in prokaryotic ribosome is

A. 40 S and 30 S

B. 50 S and 20 S

C. 50 S and 30 S

D. 60 S and 20 S

Answer: C

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260. Ribosone mainly has

A. DNA

B. RNA

C. Carbohydrate

D. None of these

Answer: B

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261. Eukaryotic 80 S ribosome breaks into

A. 40 S and 40 S

B. 60 S and 40 S

C. 60 S and 50 S

D. 50 S and 30 S

Answer: B

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262. Which of the following pairs is correct

A. Svedberg unit- Biomembranes

B. Polyribosomes -RNA

C. Dictyosomes - Suicidal sacs

D. Cisternae - Mitochondria

Answer: B

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263. What is true about ribosomes

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

B. These are found only in eukaryotic cells

C. These are self-splicing introns of some mRNA to form

D.

Answer: B

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

A. Polysome

B. Polyhedral bodies

C. Plastidome

D. Nucleosome

Answer: A

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265. The colour or rose petals is due to water soluble pigments present in the

A. Cytoplasm

B. Nucleus

C. Intercellular spaces

D. Vacuoles

Answer: D

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266. Match column I with column II and select the correct option

Column I	Column II
Sap vacuole	1. Contain digestive enzyme
Contractile vacuole	2. Store metabolic gases
Food vacuole	3. Osmoregulation
Air vacuole	4. Store lipids
Sphaerosomes	5. Store and concentrate mineral salts & nutrients

A. A-5, B-3, C-1, D-2, E-4

B. A-2, B-3, C-4, D-5, E-1

C. A-5, B-2, C-3, D-A, E-4

D. A-5, B-2, C-2, D-1, E-4

Answer: A

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267. Read the following statements and identify the correct options given

A. Sap vacuoles-contain digestive enzymes with the help of which nutrients are digested options given

B. Contractile vacuoles - take part in osmoregulations and excretion

C. Food vacuoles - store and concentrate mineral salts as well as nutrients

D. Air vacuoles - store metabolic gases and help in buoyancy of cells

A. A and B are correct

B. A and C and correct

C. A and D are correct

D. B and D correct

Answer: D

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268. Which is not true about spareosomes

A. Arise from ER.

B. Related to fat

C. Single membrane bound strutuce

D. Involved in photorespiration

Answer: D

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269. Peroxisomes are rich in

A. DNA

B. RNA

C. Catalytic enzymes

D. Oxidative enzymes

Answer: D

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270. Tonoplast is a

A. Covering layer of golgi complex

B. Covering layer of vacuoles

C. Covering layer of microbodies

D. Non-living cytoplasmic content

Answer: B

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271. Vacuole in a plant cell

A. Lacks membrane and contains air

B. Lacks membrane- bound and contains storage proteins and lipids

C. Is membrane-bound and contains storage proteins and lipids

D. Is membrane-bound and contains water and excretory substances

Answer: D

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272. Is which one of the following would you expect to find glyoxysomes

A. Endosperm of wheat

B. Endosperm of castor

C. Plaisade cells in leaf

D. Root hairs

Answer: B

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273. Hyaloplasm of vacuole contains

A. Air

B. Water

C. Water and minerals

D. Nothing

Answer: C

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274. DNA remains absent in

A. Chloroplast

B. Nucleus

C. Peroxisomes

D. Chromosomes

Answer: C

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275. What is degraded by Peroxisomes

A. Carbon dioxide

B. Hydrogen peroxide

C. Litheum oxide

D. Carbon monoxide

Answer: B

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276. 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. Vacuole

B. Lysosome

C. Golgi complex

D. Peroxisome

Answer: D

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277. Which one of the following is not a cell inclusion

A. Crystal

B. Vacuole

C. Starch

D. Fat droplets

Answer: B

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278. Which of the following is correct in plant cell

A. Bigger vacuole with rigid cell wall

B. Centriole take part in cell division

C. Centrosome are inactive in non-dividing cell

D. Absence of cell membrane

Answer: A

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

A. Peroxisomes

B. Mitochondria

C. Proplastids

D. Glyoxysomes

Answer: D

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280. Glyoxysomes occur in

A. Both plant and animal cells

B. Plant cells only

C. Animal cells only

D. All types of cells

Answer: B

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281. 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. Microsome

D. Glyoxysomes

Answer: D

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282. The osmotic expanison of a cell kept in water is chiefly regulated by

A. Plastids

B. Ribosomes

C. Mitochondria

D. Vacuoles

Answer: D

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283. Which of the following parts of a cell is non-living

A. Centriole

B. Vacuole

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

D. Mitochondria

Answer: B

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284. The fluid part of cell called cell sap is the

A. Non-living contents of a cell

B. Living contents of a cell

C. Non-living contents of the vacuole of cell

D. Living contents of the vacuole of cell

Answer: C

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285. Peroxisome' is the microbody of a cell that helps in

A. Removal of electron and associated hydrogen

B. Removal of proton

C. Conversion of carbohydrate into fat

D. Conversion of carbohydrate into protein

Answer: A

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

" "

The filaments associated with cilia and flagella are constituted by

A. Golgi appartus

B. Microfilaments

C. Microtubules

D. Endoplasmic reticulum

Answer: C

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287. Centrioles and centrosomes are present in cells of

A. Bacteria

B. Cyanobacteria

C. Green plants

D. Animals

Answer: D

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288. Function of centriole is

A. Formation of spindle fibres

B. Formation of nucleolus

C. Initiation of cell division

D. Formation of celll plate

Answer: A

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289. The function of centrosome is

A. Inhibition of cell division

B. Initiates cell division

C. To increase protein synthesis

D. None of these

Answer: D

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290. Microtubules are absent in

A. Mitochondria

B. Flagella

C. Spindle fibres

D. Centriole

Answer: A

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291. The main structure of centriole is

A. 9+3 fibrils

B. 9+2 fibrils

C. Nine triplets

D. 13 globular subunits

Answer: C

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292. A plant cell usuall differs from an animal cell in the absence of

" " Or

Plant cells normally lack " " Or

Which of the following organelles is devoid of DNA yet is capable of duplication

A. Ribosomes

B. Centriole

C. Mitocndria

D. E.R.

Answer: B

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293. The usual axonemal arrangement of microtubules is

A. 6 pairs of doublets radially arranged at periphery with a pair of centraally located microtubules

B. 6 pairs of doublets radially arranged at periphery with a single centrally located microtubule

C. 9 pairs of doublets radially arranged at periphery with a pair of centrally located microtubules

D. 9 pairs of doublets radially arranged at periphery with a single centrally located microtubule

Answer: C

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

A. Intermediate filaments

B. Lamins

C. Microtubules

D. Microfilaments

Answer: D

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295. Number of protofilaments in microtubule is

A. 10

B. 12

C. 5

D. 13

Answer: D

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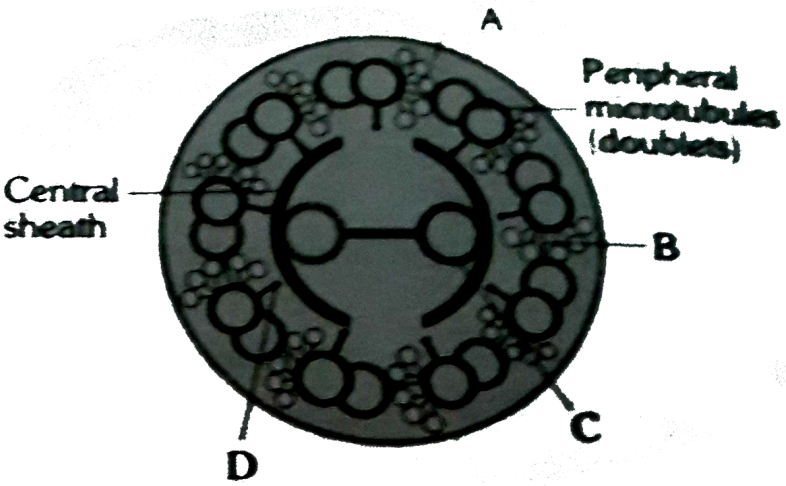
296. See the section of cilia / flagella showing the different parts

In which of the following options all the four blanks A, B, C and D are correctly identified



A. A- Plasma membrane, B- Interdoublet bridge, C- Hub, D- Arm

B. A-Plasma membrane, B- Inerdoublet bridge, C- Hub, D- Radial spoke

C. A- Plasma membrane, B- Arm, C - Central microtubule, D - Radial spoke

D. A- Plasma membrane, B- Interdoublet bridge, C - Central microtubule, D - Radial spoke

Answer: D

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297. Pattern of organisation of cilia and flagella is

A. $9 + 0$

B. $9 + 1$

C. $9 + 2$

D. $9 + 3$

Answer: C

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298. Flagella with single strand and composed of flagellin is found in

A. Prokaryotes

B. Eukaryotes

C. Both (a) and (b)

D. None of these

Answer: A

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299. Basal bodies of cilia and flagella are derived from

A. Plasma membrane

B. Genes

C. Centrioles

D. Lysosomes

Answer: C

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300. The principal protein of cilia and flagella is

A. Tubulin

B. Albumin

C. Globulin

D. Gliadin

Answer: A

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301. In flagellar membrane which enzyme catalyses ATP

A. Cytoplasmic dynein

B. Asconic dynein

C. Kinesis

D. Myosin

Answer: B

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302. 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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303. Prokaryotic flagella possess

A. Helically arranged protein molecule

B. Protein membrane enclosed fibre

C. Unit membrane enclosed fibre

D. Microtubular 9+2 membrane enclosed structure

Answer: A

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304. Microtubule is involved in the

A. Cell division

B. DNA recognition

C. Muscle contraction

D. Membrane architecture

Answer: A

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305. Tubulin protein occurs in

A. Rough endoplasmic reticulum

B. Microtubules

C. Thylakoids

D. Digestive enzymes

Answer: B

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306. 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. Plasmalemma

D. Cytoskeleton

Answer: D

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307. Term basal body is associated with the development of

A. Cilia and flagella

B. Cell plate

C. Phragmoplast

D. Kinetochore

Answer: A

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308. The main function of microtubules is

A. Protein synthesis

B. Movement of cillia and flagella

C. Formation of spindle fibres

D. Both (b) and (c)

Answer: D

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309. Match List I and List II and select the correct answer using the code given below the lists

List I	List II
Microtubules	Structural components of cilia
Centrioles	Store hydrolytic enzymes
Peroxisomes	Store oil protein and starch in plants

A. 1, 2 and 3 are correct

B. 1 and 2 are correct, 3 is false

C. 1 is correct, 2 and 3 are false

D. 1 and 3 are correct, 2 is false

Answer: C

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

A. Microtubules of cilia are composed of tubulin

B. Cilia contain an outer ring of nine double micortubules surrounding two single microtubules

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

D. Cilia are hair-like cellular appendages

Answer: C

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311. Consider the following statements

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

(B) Ribosomes are the site of protein synthesis

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

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

Of the above statements

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

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

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

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

Answer: C

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312. Microfilaments in eukaryotic cells are made up of

A. Actin

B. Albumin

C. Globulin

D. Fibrin

Answer: A

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

A. 11

B. 20

C. 22

D. 10

Answer: B

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314. Controlling centre of cell is

" " Or

The "master mind" of the cell is

A. Nucleus

B. Nucleolus

C. Mitochondria

D. Ribosome

Answer: A

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315. Four different types of chromosomes but of the same size are serialized as

A. Telocentric, metacentric, acrocentric, submetacentric

B. Metacentric, acrocentric, submetacentric, telocentric

C. Metacentric, submetacentric, acrocentric, telocentric

D. Metacentric, telocentric, acrocentric, submetacentric

Answer: C

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316. Basic structure of chromatin is composed of

A. Non-histone proteins wrapped around DNA

B. Histone proteins wrapped around DNA

C. RNA wrapped around histones

D. DNA wrapped around histones

Answer: B

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317. The function of nucleolus is the synthesis of

A. DNA

B. m-RNA

C. r-RNA

D. t-RNA

Answer: C

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318. Nuclear material without nuclear membrane is observed in

A. Bacteria and green algae

B. Cyanobacteria and red algae

C. Bacteria and cyanobacteria

D. Mycoplasmas and green algae

Answer: C

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

A. Centriole

B. Endoplasmic reticulum

C. Nuclear pores

D. Golgi apparatus

Answer: C

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320. The terms 'nucleolus' was coined by

A. R. Brown

B. H. Hooks

C. Bowman

D. Hanstein

Answer: C

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321. Karyolymph is a

A. Nuclear sap

B. SPM membrane

C. Nuclear pore

D. None of these

Answer: A

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322. The nuclear spindle consists of

A. One type of fibre

B. Two types of fibres

C. Three types of fibres

D. Four types of fibres

Answer: C

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323. Karyology is the study of

A. Cell

B. Nucleus

C. Tissue

D. Genes

Answer: B

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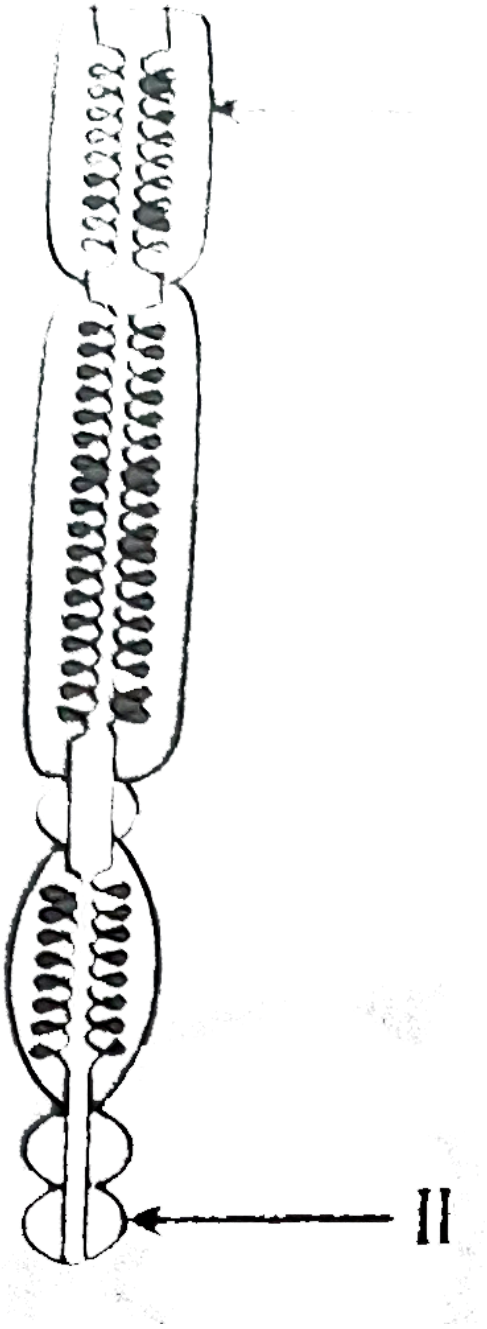
324. In the given diagrma I and II indicate



A. Chromomere and chromonemata

B. Centromere and secondary constriction

C. Secondary constriction and satellite

D. Telomere and satellite

Answer: D

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325. Spindle fibers attach on to

A. Telomere of the chromosome

B. Kinetochore of the chromosome

C. Centromere of the chromosome

D. Kinetosome of the chromosome

Answer: B

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326. Nucleoli are rich in

A. DNA and RNA

B. DNA, RNA and proteins

C. DNA

D. RNA

Answer: B

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327. Histone proteins found in nuclei of eukaryotes are

A. Acidic

B. Basic

C. Neutral

D. Amphoteric

Answer: B

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328. The structure of nuclear membrane facilitates

A. Synapsis of homologous chromosomes at meiosis

B. Nculeo-cytoplasmic exchange of materials

C. Anaphasic separation of daughter chromosomes

D. Organization of spindles

Answer: B

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329. The nucleus has

A. One membrane with pores

B. Two membrane with pores

C. Two membranes with pores through which substances do not pass

D. Two membranes with pores through which macromolecules may pass

Answer: D

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330. Spindle chromosomes have

A. Centriole

B. Kinetochore

C. Chromocentre

D. Chromomere

Answer: B

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331. 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 chromosome

B. Acrocentric

C. Telocentric

D. Sub- metacentric

Answer: D

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

A. Adenine rich repeats

B. Guanine rich repeats

C. Thymine rich repeats

D. Cytosine rich repeats

Answer: B

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333. Present in nucleolus is

A. Golgi complex

B. Lysosome

C. Mitochondria

D. Chromosome

Answer: D

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334. A tetrad consists of

A. Four non-homologous chromatids

B. Four non-homologous chromosomes

C. Two sets of homologous chromosomes, each with two chromatids

D. Four homologous pairs of chromosomes

Answer: C

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335. In nucleoplasm, a conspicuous body of spherical shape attached to a particular chromosome on a definite position is called

A. Plasmid

B. Karyolymph

C. Nucleolus

D. Nuclear reticulum

Answer: C

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336. Identify the correct match betwenn types of chromosomes and their descrptions

Chromosomes	Position of centromere
A. Metacentric	1. At the tip
B. Submetacentric	2. Almost near the tip
C. Acrocentric	3. At the middle
D. Telocentric	4. Slightly away from the middle

A. A-1, B-3, C-2, D-4

B. A-4, B-3, C-2, D-1

C. A-1, B-2, C-3, D-4

D. A-4, B-3, C-1,D-2

Answer: D

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337. Who showed that the nuclear membrane has many pores or circular structures or annuli

A. Fawcell

B. Strasburger

C. Butchen

D. Callan and Tomlin

Answer: D

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338. Nucleolemma is a part of

A. Nuclear membrane

B. Nuclear reticulum

C. Nucleolus

D. Nucleoplasm

Answer: A

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339. Minimum haploid numbers of chromosomes in plant kindgom

A. 3

B. 2

C. 1

D. 4

Answer: B

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340. The given diagram shows a chromosome

Which of the following table refers correctly to the chromosome

A.	No. of centromere	No.of Kinetochore	No.of arms
	1	2	2
B.	No. of centromere	No.of Kinetochore	No.of arms
	2	2	4
C.	No. of centromere	No.of Kinetochore	No.of arms
	1	2	4
D.	No. of centromere	No.of Kinetochore	No.of arms
	2	1	4

Answer: C

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341. In a cell that is not dividing, the chromosomes are visible as a tangle of fine threads called

A. Microtubules of cilia are composed of tubulin

B. Chromatin

C. Microfilaments

D. Nucleotin

Answer: B

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342. The nucleus is separated from surrounding cytoplasm by a nuclear membrane, which is

A. Single layered with pores

B. Single layered without pores

C. Double layerd with pores

D. Double layered without pores

Answer: C

Watch Video Solution

343. Nucleoproteins in a cell are synthesized in

A. Outside the nucleouls

B. Nucleoplasm

C. Nuclear membrane

D. Nucleolus

Answer: A

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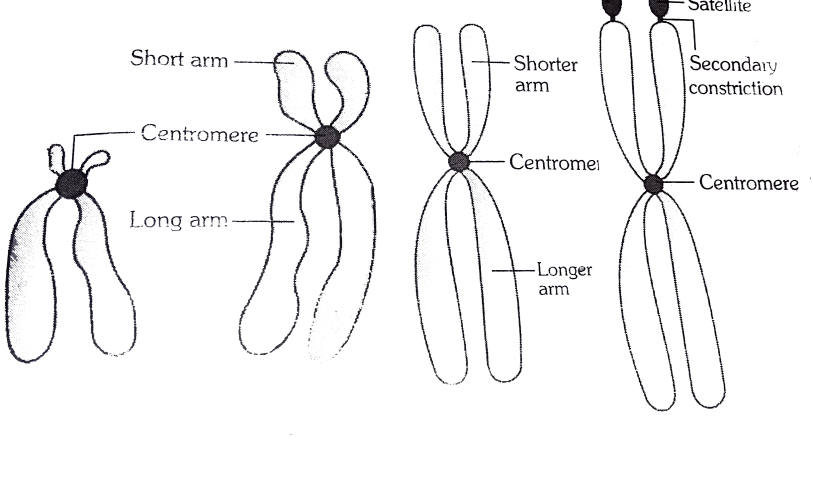
344. See the following figure and identify it



A.

A	B	C	D
Metacentric chr.	Submetacentr ic chr.	Acrocentri c chr.	Teloce

B.

A	B	C	D
Submetacentric chr.	Metacentric chr.	Telocentric chr.	Acrocer

C.

A	B	C	D
Acrocentric chr.	Telocentric chr.	Metacentri c chr.	Submetace

D.

A	B	C	D
Telocentric chr.	Acrocentric chr.	Submetacentric chr.	Metacer

Answer: D

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345. The sex chromosomes of plants were first discovered in

A. Algae

B. Fungi

C. Pteridophyta

D. Flowering plants

Answer: D

View Text Solution

346. Which of the following are used to define the karyotype of a species

1. The number of chromosomes

2. The chromosome length

3. The positions of the centromeres

A. 1,2 and 3 are correct

B. Only 1 and 2 are correct

C. Only 2 and 3 are correct

D. Only 1 and 3 are correct

Answer: A

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347. The part which does not take strain amongst the following is

A. Chromatid

B. Centromere

C. Chromatin

D. Chromomere

Answer: B

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348. DNA is mainly found in

A. Nucleus only

B. Nucleus and cytoplasm

C. Cytoplasm only

D. All of these

Answer: A

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349. Which of the following is not contained in a eukaryotic nucleus

A. Nucleosome

B. Nucleolus

C. Chromatin

D. Circular DNA molecuels

Answer: D

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350. A common characteristic feature of plant sieve tube cells and most of mammalian erythrocytes is

A. Absence of mitochondria

B. Presence of cell wall

C. Presence of haemoglobin

D. Absence of nucleus

Answer: A

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351. Select one which is not true for ribosome

A. Made of two sub units

B. Form polysome

C. May attach to mRNA

D. Have no role in protein synthesis

Answer: D

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352. Which one of these is not a eukaryote

A. Euglena

B. Anabena

C. Spirogyra

D. Agaricus

Answer: B

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

A. Basic Fuchsin

B. Safranin

C. Methylene blue

D. Carmine

Answer: D

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

i. Mycoplasma, ii. Ostrich eggs

iii. Human RBC, iv. Bacteria

A. I,iv, iii & ii

B. I,ii, iii & iv

C. ii, I, iii & iv

D. iii, ii, I & iv

Answer: A

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355. Which of the following features is common to prokaryotes and many eukaryotes

A. Chromosomes present

B. Cell wall present

C. Nuclear membrane present

D. Sub cellular organelles present

Answer: B

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356. Which of the following options is true for a secretory cell ?

A. Golgi apparatus is absent

B. Rough Endoplasmic Reticulum (RER) is easily observed in the cell

C. Only Smooth Endoplamic Reticulum (SER) is present

D. Secretory granules are formed in nucleus

Answer: B

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357. What is a tonoplast

A. Outer membrane of mitochondira

B. Inner membrane of chloroplast

C. Membrane boundry of the vacuole of plant cells

D. Cell membrane of a plant cell

Answer: C

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358. Which of the following is not true of a eukaryotic cell

A. It has 80S type of ribosome present in the mitochondria

B. It has 80S type of ribosome present in the cytoplasm

C. Mitochondria contain circular DNA

D. Membrane bound organelles are present

Answer: A

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359. Which of the following statements is not true for plasma membrane

A. It is present in both plant and animal cell

B. Lipid is present as a bilayer in it

C. Proteins are present intergrated as well as loosely associated with the lipid bilayer

D. Carbohydrate is never found in it

Answer: D

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360. Plastid differs from mitochondria on the basis of one of the following features. Mark the right answer

A. Presence of two layers of membrane

B. Presence of ribosome

C. Presence of chlorophyll

D. Presence of DNA

Answer: C

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361. Which of the following is not a function of cytoskeleton in a cell

A. Intracellualr transport

B. Maintenance of cell shape and structure

C. Support of the organelle

D. Cell motility

Answer: A

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362. The stain used to visualis mitochondria is

A. Fast green

B. Safranin

C. Aceto carmine

D. Janus green

Answer: D

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363. Match the following with correct combination

	Column I		Column II
A.	Endoplasmic reticulum	1.	Stack of cisternae
B.	Sphcrosome	2.	Store oils or fats
C.	Dictyosomes	3.	Synthesis and storage of lipids
D.	Peroxisome	4.	Photorespiration
E.	Elaioplasts	5.	Detoxification of drugs

A. A-5, B-3, C-1, D-4, E-2

B. A-5, B-3, C-2, D-4, E-1

C. A-2, B-3, C-1, D-4, E-5

D. A-3, B-3, C-1,D -5, E-2

Answer: A

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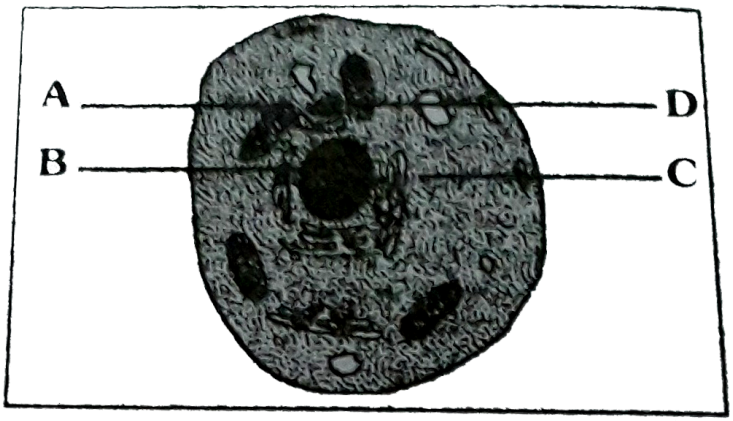
364. The RER in the cell synthesised a protein which would be later used in building the plasma membrane. But it is observed that the protein in the membrane is slightly different from the protein made in the RER. The protein was probably modified in another cell organelle. Identify that

organelle in the given diagram



A. D

B. A

C. B

D. C

Answer: A

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365. Cells obtained from an organism were homogenised and centrifuged. A test indicated that the cells contained glycogen. It you were asked to find out as quickly as possible whether the cells were from a plant or an animal, you would

A. Examine the centrifuge for the presence of extracts of chloroplasts

B. Answer immdeiately that the cells were from a plant source

C. Examine the centrifuge for the presence of extracts of centrioles

D. Answer immediately that the cells were from an animal source

Answer: D

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366. Cellulose, the most important constituent of plant cell wall is made up of

A. Branched chain of glucose molecules linked by α 1, 6 glycosidic bond at the site of branching

B. Unbranched chain of glucose molecules linked by α 1, 4 glycosidic bond

C. Branched chain of glucose molecules linked by α 1, 4 glycosidic bond in straight chain and α 1, 6 glycosidic bond at the site of branching

D. Unbranched chain of glucose molecules linked by α 1, 4 glycosidic bond

Answer: D

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367. Which of the following statements are false

A. Most cells are tiny and their volume ranges from 1 to $1000nm^3$

B. Some cells have the microvilli to increase the absorptive surface area.

C. All cells arise from pre-existing cells.

D. In plants, translocation of solutes is performed by xylem vessels and trachieds.

Answer: B

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368. Which of the following has centrioles

A. Chromosomes present

B. Spindle fibres

C. Centrosomes

D. Centromeres

Answer: C

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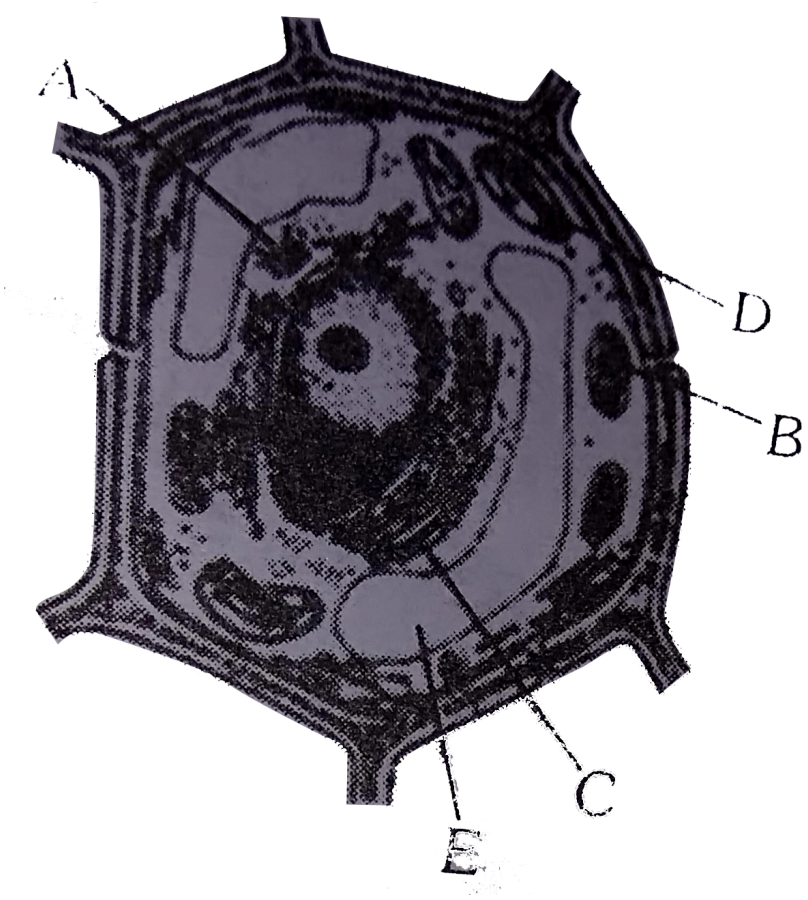
369. The diagram of the ultranstructure of a plant cell is given below. Identify the functions of the organelles labelled. A,B,C,D,E in the diagram



A.

A	B	C	D	St
Intracellular transport	Site of oxidative phosphorylation	Principle director of macromolecular traffic	Site of photoph-osphorylation	ce

B.

A	B	C	D	
Principle director of macromole-cular traffic	Site of oxidative phosphorylation	Intracellular transport	Site of photop-hosphorylation	Stora cell s

C.

A	B	C	D	E
Site of photophos-phorylation	Storage of cell sap	Intracellular transport	Site of oxidative phosphor-rylation	Principle director of macromolec ular traffic

D.

A	B	C	D	Intr
Storage of cell sap	Site of oxidative phosphorylation	Principle direction of macromolecular traffic	Site of photophosphor ylation	tran

Answer: B

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370. Disulphide bonds which acts as atomic staples to reinforce the conformation of proteins are found in

A. Endoplasmic reticulum

B. Lysosome

C. Golgi apparatus

D. Cytosol

Answer: A

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371. 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. (iii) (iv) (i) (ii)

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

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

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

Answer: A

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372. Consider the following statements

A. In prokaryotic cells a special membranous structure formed by the extension of the plasma membrane into the cell is known as polysome

B. The smooth endoplasmic reticulum is the major site for synthesis of glycoproteins

C. RuBisCo is the most abundant protein in the whole of biospshere

D. Mitochondria, chloroplasts and peroxisomes are not considered as part of endomembrane system

Of the above statements

A. C and D alone are correct

B. A and B alone are correct

C. B and C alone are correct

D. A and D alone are correct

Answer: A

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373. Cellular organelles with membranes are

A. Chormosomes, ribosome and endoplasmic reticulum

B. Endoplasmic reticulum, ribosomes and nuclei

C. Lysosomes, Golgi apparatus and mitochondria

D. Nuclei, ribosomes and mithochondria

Answer: C

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374. House-keeping proteins occur in

A. Endoplasmic reticulum

B. Golgi complex

C. Cytoskeleton

D. All of the above

Answer: D

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375. Consider the following statements and select the correct option

A. The endomembrane system includes plasma membrane, ER, Golgi complex, lysosomes and vacuoles

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

C. Ribosomes are involed in protein synthesis

D. Mitochondria help in oxidative phosphorylation and generation of ATP

A. B, C and D are correct

B. A -alone is correct

C. B - alone is correct

D. C- alone is correct

Answer: A

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376. Which of the following four cell structures is correctly matched with the accompanying description

A. Plasma membrane - Outer layer of cellulose of chitin, or absent

B. Mitochondria - Bacteria like elements with inner membrane forming sacs containing chlorophyll, found in plant cells and algae

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

D. Golgi apparatus - Stacks of flattened vesicles

Answer: D

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377. See the given diagram (cell membrane) and identify the components labelled A, B, C,D and E from the list (i) to (vii) given along with

Components

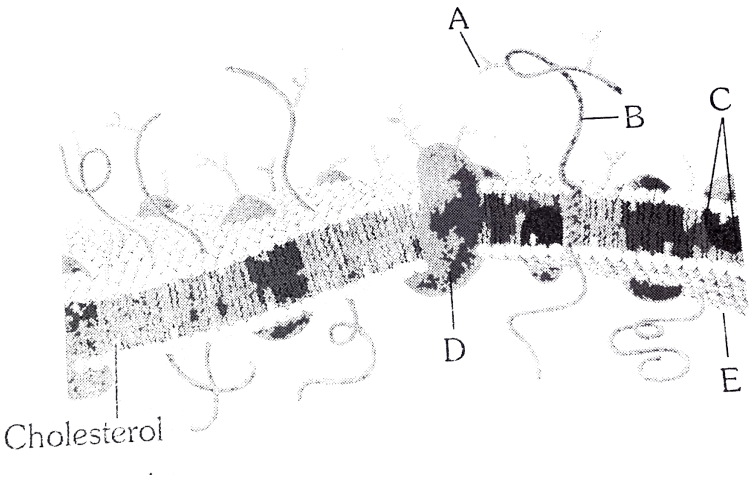
(i) Sugar , (ii) Protein

(iii) Lipid bilayer , (iv) Integral protein

(v) Cytoplasm , (vi) Cell wall

(vii) External protein

The correct components are



A. A- (i), B -(ii), C-(iii), D- (vii), E- (v)

B. A- (i), B -(ii) , C-(iii), D-(iv) , E-(vi)

C. A-(ii), B-(i), C-(iii), D-(iv), E-(v)

D. A-(i), B-(ii), C-(iii), D-(iv), E-(v)

Answer: D

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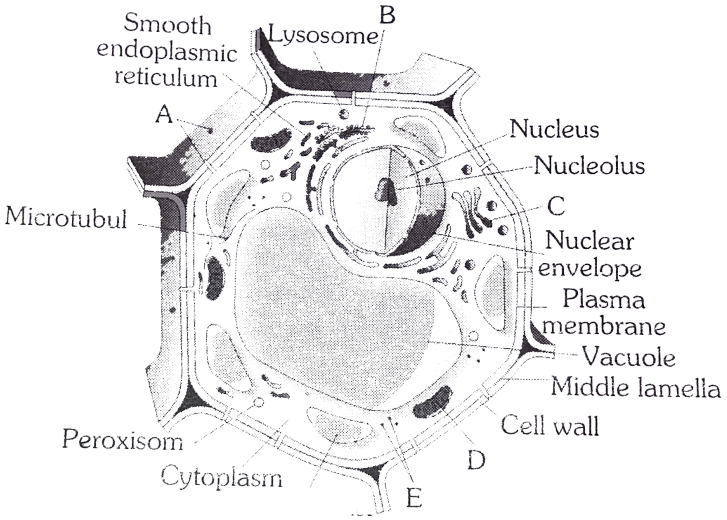
378. The given figure shows some of the missing structures in a plant cell (A -E). Identify the marked alphabets



A. A -Tight junction, B- Rough endoplasmic reticulum, C- Golgi apparatus, D- Mitochondrion, E- Ribosome

B. A-Plasmodesmata, B - Smooth endoplasmic reticulum, C- Gogi apparatus, D- Mitochondrion, E- Ribosomes

C. A- Desmosome, B- Rough endoplasmic reticulum, C- Golgi apparatus, D- Mitochondrion, E- Ribosomes

D. A- Plasmodesmata, B- Rough endoplasmic reticulum, C- Golgi apparatus, D- Mitochondrion, E- Ribosomes

Answer: D

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379. The given diagram shows important structures in an animal cell. Identify it

(I) The structure replicates during mitosis and generates the spindle

(II) Major site for synthesis of lipid

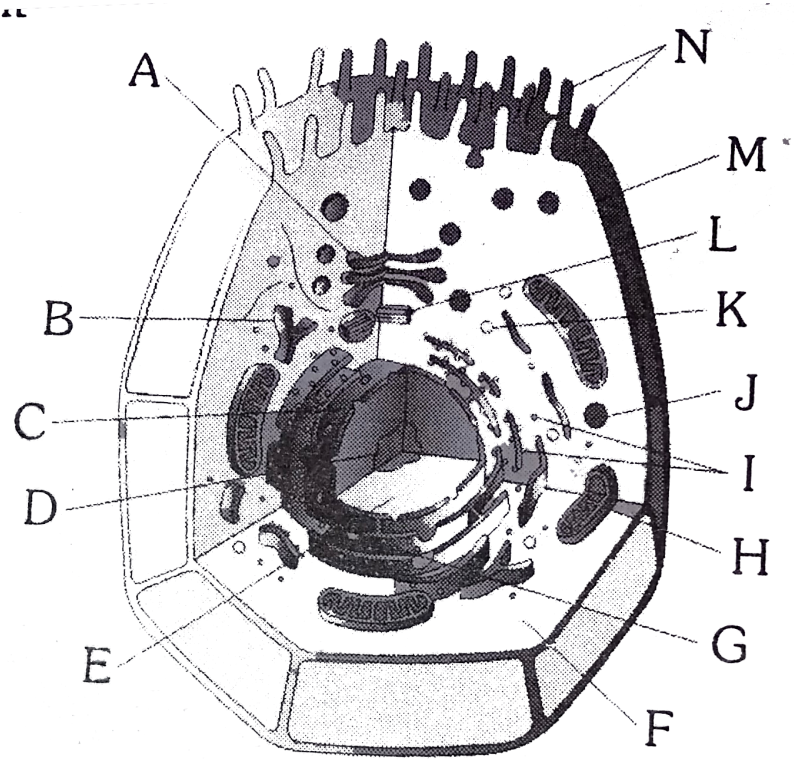
(III) Power house of the cell

(IV) Store house of digestive enzyme

(V) Increases the surface area for the absorption of materials

(VI) Site of glycolysis

(VII) Site for active ribosomal RNA synthesis



A. I-M, II-A, III-H, IV-J, V-N, VI-F, VII-D

B. I-L, II-B, III-H, IV-J, V-N, VI-F, VII-D

C. I-L, II-G, III-H, IV - J, V-N, VI-F, VII-D

D. I-L, II-G, III-H, IV-J, V- N, VI- F, VII-D

Answer: B

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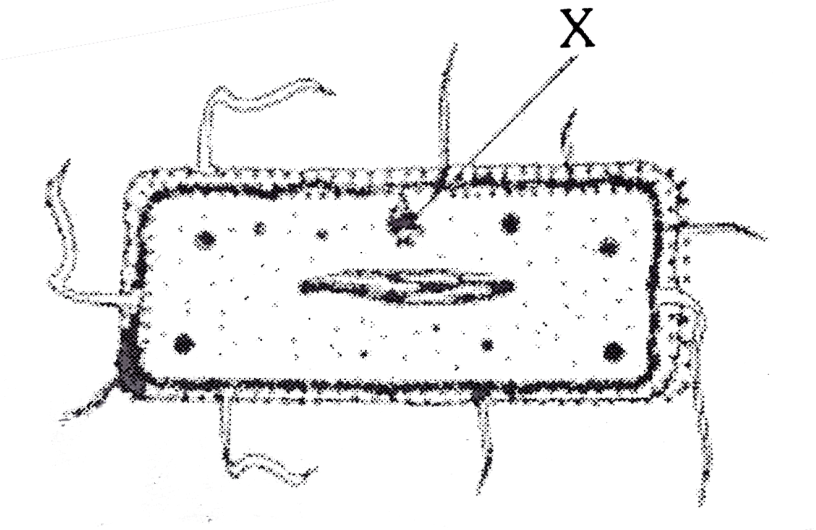
380. Some bacterial cells were fixed for microscopic observation. A structure X was observed on most occasions at the cell membrane



In the above diagram, label X represents

A. Mesosome

B. Ribosome

C. Plasmids

D. Nucleoid

Answer: A

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381. 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.

A	B	C	D
i	iii	ii	iv

B.

A	B	C	D
iv	iii	i	ii

C.

A	B	C	D
iv	ii	i	iii

D.

A	B	C	D
i	ii	iv	iii

Answer: C

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382. 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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383. Cytoskeleton network of a cell is built by a process called

A. Triphasic polymerization

B. Biphasic polymerization

C. Trendmilling

D. Dynamic instability

Answer: D

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384. Nissl bodies are mainly composed of

A. Proteins and lipids

B. DNA and RNA

C. Nucleic acids and SER

D. Free ribosomes and RER

Answer: D

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385. Assertion : The number of mitochondria in a cell do not correspond to the function of the cell.

Reason : Mitochondria are common to both plant and animal cells.

A. If both the assertion and the reason are true and the reason is a correct explanation of the assertion

B. If both the assertion and reason are true but the reason is not a correct explanation of the assertion

C. If the assertion is true but the reason if false

D. If the assertion is false but reason is true

Answer: D

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386. Assertion : Mitochondria and chloroplasts are semiautonomous organelles.

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

A. If both the assertion and the reason are true and the reason is a correct explanation of the assertion

B. If both the assertion and reason are true but the reason is not a correct explanation of the assertion

C. If the assertion is true but the reason if false

D. If both the assertion and reason are false

Answer: C

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387. Assertion : A cell membrane shows fluid behaviour.

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

A. If both the assertion and the reason are true and the reason is a correct explanation of the assertion

B. If both the assertion and reason are true but the reason is not a correct explanation of the assertion

C. If the assertion is true but the reason if false

D. If both the assertion and reason are false

Answer: A

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388. Assertion : Lysosomes help in photorespiration.

Reason : Lysosome have basic enzyme.

A. If both the assertion and the reason are true and the reason is a correct explanation of the assertion

B. If both the assertion and reason are true but the reason is not a correct explanation of the assertion

C. If the assertion is true but the reason if false

D. If both the assertion and reason are false

Answer: D

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389. Assertion : $Na^+ - K^+$ ATPase is an important membrane associated enzyme.

Reason : It helps in ion transfer across the memrbane.

A. If both the assertion and the reason are true and the reason is a correct explanation of the assertion

B. If both the assertion and reason are true but the reason is not a correct explanation of the assertion

C. If the assertion is true but the reason if false

D. If both the assertion and reason are false

Answer: A

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

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

A. If both the assertion and the reason are true and the reason is a correct explanation of the assertion

B. If both the assertion and reason are true but the reason is not a correct explanation of the assertion

C. If the assertion is true but the reason if false

D. If both the assertion and reason are false

Answer: D

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

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

A. If both the assertion and the reason are true and the reason is a correct explanation of the assertion

B. If both the assertion and reason are true but the reason is not a correct explanation of the assertion

C. If the assertion is true but the reason if false

D. If both the assertion and reason are false

Answer: A

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392. Assertion : Leucoplasts give rise to other types of plastids.

Reason : Chromoplasts do not get changed to other types of plastids.

A. If both the assertion and the reason are true and the reason is a correct explanation of the assertion

B. If both the assertion and reason are true but the reason is not a correct explanation of the assertion

C. If the assertion is true but the reason if false

D. If both the assertion and reason are false

Answer: B

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393. Assertion : Cell wall is not found in animal cell.

Reason : Animal cells are covered by cell membrane.

A. If both the assertion and the reason are true and the reason is a correct explanation of the assertion

B. If both the assertion and reason are true but the reason is not a correct explanation of the assertion

C. If the assertion is true but the reason if false

D. If both the assertion and reason are false

Answer: A

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394. Assertion : ER acts as a circulatory system.

Reason : ER functions as cytoskeleton.

A. If both the assertion and the reason are true and the reason is a correct explanation of the assertion

B. If both the assertion and reason are true but the reason is not a correct explanation of the assertion

C. If the assertion is true but the reason if false

D. If both the assertion and reason are false

Answer: B

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395. Assertion : Eukaryotic cells have more DNA than prokaryotes.

Reason : Eukaryotes are genetically more complex than prokaryotes.

A. If both the assertion and the reason are true and the reason is a correct explanation of the assertion

B. If both the assertion and reason are true but the reason is not a correct explanation of the assertion

C. If the assertion is true but the reason if false

D. If both the assertion and reason are false

Answer: A

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396. Assertion : Schleiden and Schwann were the first to observe the cells and to put forward cell theory.

Reason : The cells are always living unit.

A. If both the assertion and the reason are true and the reason is a correct explanation of the assertion

B. If both the assertion and reason are true but the reason is not a correct explanation of the assertion

C. If the assertion is true but the reason if false

D. If both the assertion and reason are false

Answer: D

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397. Assertion : Cell membrane is semipermeable.

Reason : The constituent molecules can freely move in the membrane.

A. If both the assertion and the reason are true and the reason is a correct explanation of the assertion

B. If both the assertion and reason are true but the reason is not a correct explanation of the assertion

C. If the assertion is true but the reason if false

D. If both the assertion and reason are false

Answer: B

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398. Assertion : Mitochondria is known as power house of cell.

Reason : ATP production takes place here.

A. If both the assertion and the reason are true and the reason is a correct explanation of the assertion

B. If both the assertion and reason are true but the reason is not a correct explanation of the assertion

C. If the assertion is true but the reason if false

D. If both the assertion and reason are false

Answer: A

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399. The term lipochondria was suggested for

A. Mitochondria

B. E.R.

C. Golgicomplex

D. All of these

Answer: C

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400. Nucleoid is

A. A single inactive nucleus having double stranded DNA and proteins

B. A group of chromosomes associated with proteins

C. A nucleus without nuclear membrane and nucleolus or genetic material of prokaryotes

D. A chromosome assocated with proteins

Answer: C

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401. Green potatoes are toxic due to

A. Phytoalexins

B. Solanin

C. Triazine

D. Hormones

Answer: A

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402. Desmosomes are

A. Connecting bodies between cells

B. Fat storage cells

C. Pigment bodies

D. None of these

Answer: A

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403. What is lacking in an animal cell

A. Plasmodesmata

B. 80s ribosomes

C. Centriole

D. All of these

Answer: A

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404. Importance of mitochondria in respiration was first discovered by

A. S. Madani

B. Meves

C. Michaelis

D. Barbergan

Answer: C

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405. Electron transport sytem in mitochondria is located in

A. Outer membrane

B. Inter-cristae space

C. Inner membrane

D. Inner membrane space

Answer: C

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406. What is the proportion of lipids in chloroplast

A. 5-10%

B. 40-50%

C. 1-2%

D. 20-30%

Answer: D

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407. Match the following

Bacteria	1. Synthesis and storage of lipids
Sphaerosomes	2. Idiogram
Chloroplasts	3. Glycocalyx
Karyotype	4. Thylakoids

A. A-3,B-2, C-4, D-1

B. A-3, B-1, C-2, D-4

C. A-4, B-3, C-2, D-1

D. A-3, B-1, C-4, D-2

Answer: D

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408. Phragmoplast is

A. Cell plate formed by endoplasmic reticulum, golgi bodies and secretory vesicles during cytokinesis

B. Plastid capable of fragmentation

C. Plastid capable of duplication

D.

Answer: A

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409. One of the most common enzyme found in peroxisome is

A. Hydrolase

B. Catalse

C. Dehydrogenase

D. Reductase

Answer: B

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