



BIOLOGY

BOOKS - SANTRA BIOLOGY (BENGALI ENGLISH)

CELL - AS THE BASIC UNIT OF LIFE



- 1. The only microscope which gives 3D images is
 - A. Compound microscope
 - B. Electron microscope
 - C. SEM

D. Fluorescent microscope

Answer: C

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2. Very high wavelength rays are used in one of the following microscope

A. Fluorescent

B. Polarising

C. Ultraviolet

D. Phase contrast

Answer: B

3. One of the following dyes cannot be used for staining chromatin material

A. Acetocarmine

B. Crystal violet

C. Haematoxylin

D. Feulgen stain

Answer: B



4. The technique used for separating DNA fragment is

A. Southern blotting

B. Elisa test

C. Western blotting

D. All above

Answer: A

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5. Protoplasm is the site for all

A. Anabolic function

B. Catabolic function

C. Metabolic function

D. Physiological function

Answer: C



6. Resolving power of light microscope is

A. $0.2 \mu m$

B. $2\mu m$

 $C.0.1 \mu m$

D. $100 \mu m$

Answer: A



7. Which is the substitution of mitochondria in E. Coli?

A. Gogi body

B. Ribosome

C. Mesosome

D. Glyoxysome

Answer: C

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8. Prokaryotic nucleus is known as

A. Nucleoid

B. Genophore

C. Both above

D. None above

Answer: A



9. The longest cell in the plant kingdom is

A. Sieve tube

B. Vessel

C. Sclerenchyma fibre

D. Tracheid

Answer: C

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10. Wall of young cells in plants is mainly composed by

A. Cellulose

B. Starch

C. Glycogen

D. Protein

Answer: A

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11. The cell size is mainly dependent upon

A. Its physiological state

B. O_2 requirement

C. Basic metabolism

D. All above

Answer: D

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12. The term 'cytology' was coined by

A. Bridges

B. R. Hooke

C. Hertwig

D. Swanson

Answer: D

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13. Which statement is true for both prokaryotic and eukaryotic cells ?

A. They contain ribosomes

B. They have peptidoglycan cell walls

C. They contain true nuclei

D. They contain membrane bound organelles

Answer: A

14. Cell's cytoskeleton is formed by

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A. Cytosol

B. ER

C. Golgi bodies

D. Lysosomes

Answer: B

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15. The phenomenon of cell drinking is called

A. Endosmosis

B. Pinocytosis

C. Phagocytosis

D. Exocytosis

Answer: B

D Watch Video Solution

16. The longest living cells among the following are

A. RBC

B. B-cells

C. T-Cells

D. Memory cells

Answer: C

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17. Which of the following structure is not bounded by membrane ?

A. Spherosomes

B. Mitochondria

C. Ribosomes

D. Lysosomes

Answer: C

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18. The active transport mechanism is against cocentration gradient and

A. Requires protein

B. Does not require protein

C. Requires ATP

D. Does not require ATP

Answer: C

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19. Fluid mosaic model exhibits amphipathy because of

A. Glycoproteins

B. Phospholipids

C. Lipids

D. Glycolipids

Answer: C

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20. The most abundant material in the plant cell wall is

A. Lignin

B. Hemicellulose

C. Starch

D. Cellulose

Answer: D

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21. Cell wall of higher plants can be stained by

A. Methylene

B. Sudan V

C. Zinc chloride

D. Phloroglucinol

Answer: D





22. Plasmodesmata helps in

A. Food translocation

B. Mineral translocation

C. Translocation of phytohormones

D. All above

Answer: D



23. Controlling centre of the cell is

A. Nucleoplasm

B. Nuclear chromatin

C. Nucleus

D. All above

Answer: C

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24. Which statement is wrong about nucleolus?

A. It has rRNA and proteins

B. It has granules

C. It has lipoprotein membrane

D. It has fibres

Answer: C



25. Gastric cells secreting zymogen have well-developed

A. SER

B. RER

C. Mitochondria

D. Plastids

Answer: B



26. The ribosomes are attached to ER through

A. rRNA

B. mRNA

C. Ribophorins

D. All above

Answer: C

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27. The ER membrane is continuous with one of the following

A. Plasma membrane

- B. Nuclear membrane
- C. Membrane of Golgi
- D. All above

Answer: B

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28. The functional unit of Golgi complex is

A. Cristae

B. Thylakoid

C. Archoplasm

D. Cisternae

Answer: D

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29. Which of the following structure is present in mitochondria?

A. Oxysomes

B. Dictyosomes

C. Quantasomes

D. Polysomes

Answer: A





30. Mitochondria will be most abundant among the

A. Liver cells

B. Kidney cells

C. Brain cells

D. Cardiac muscle cells

Answer: D



31. Carbohydrate is synthesized from fat within

A. Spherosome

B. Glyoxysome

C. Lomasome

D. Lysosome

Answer: B

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32. Lysosome along with the food contents is called

A. Primary lysosome

B. Secondary lysosome

C. Lomasome

D. Liposome

Answer: B



33. Ribosome contains maximum quantity of

A. mRNA

B. Lipids

C. Steroids

D. rRNA

Answer: D



34. The types of amino acids in highest quantity in ribosomes are

A. Glycine and tryptophan

B. Lysine and arginine

C. Histidine only

D. Lysine only

Answer: B



35. The photosynthetic units are termed as

A. Microsomes

B. Spherosomes

C. Glyoxysomes

D. Quantasomes

Answer: D

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36. Pigment absent in chloroplast is

A. Chlorophyll

B. Carotene

C. Xanthophyll

D. Anthocyanin

Answer: D

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37. Microfilament present in cells are made up of

A. Myosin

B. Tubulin

C. Actin

D. All above

Answer: D



38. One of the principal structural elements of the living cell

is

A. Carbon

B. Oxygen

C. Silicon

D. Hydrogen

Answer: A



39. A fundamental requirement of every living organism is

A. Evolution

B. Order

C. Energy

D. Growth

Answer: C

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40. Study of cells in all aspects is

A. Cytology

B. Cytotaxonomy

C. Cell biology

D. Cytochemistry

Answer: C



41. One of the following is not a non-protoplasmic inclusion

A. Cystolith

B. Starch grain

C. Raphide

D. Mitochondria

Answer: D



42. Cellular totipotency means

A. Synthesis of new cells

B. Formation of new species

C. Formation of new plants

D. Capability of a plant cell to form complete plant

Answer: D

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43. Which is the principle site for synthesis of rRNA?

A. Nucleolus

B. Mitochondria

C. Chloroplast

D. ER

Answer: A

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44. Components of 70S ribosomes are

A. 50S and 20S

B. 50S and 30S

C. 40S and 40S

D. 40S and 30S

Answer: B

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45. Respiratory enzymes are stored in bacteria in

A. Mesosome

B. Plasma membrane

C. Cell wall

D. All above

Answer: A

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46. pH of the cytoplasm is

A. 5.8

B. 6.8

C. 7.8

D. 8.8

Answer: C

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47. Largest physical and chemical molecules for cell are

A. Carbohydrates

B. Lipids

C. Proteins

D. Nucleic acids

Answer: C

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48. A basic character of living being is

A. Cellular structure

B. Metabolism

C. Reproduction

D. All the above

Answer: C





49. One of the most common form of energy is

A. Thermal

B. Radiant

C. Electrical

D. All above

Answer: A



50. Quantasomes are found in

A. Mitochondria

B. Chloroplasts

C. Nucleus

D. All above

Answer: B

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51. Middle lamella is a constituent of

A. Cell membrane

B. Cell wall

C. Cytoplasm

D. Nucleoplasm

Answer: B



52. Chloroplasts are self replicating units as they possess

A. DNA

B. RNA

C. Neither DNA nor RNA

D. Both DNA and RNA

Answer: D



53. Grana and stroma lamellae occures in

A. Chloroplast

B. Ribosome

C. Gologibody

D. Mitochondria

Answer: A

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54. The colour of chromoplast can be

A. Yellow

B. Red

C. Orange

D. All of the above

Answer: D



55. Filaments present in flagella / cilia are

A. Microfibril

B. Microtubules

C. Microfilaments

D. Microvilli

Answer: B

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56. Golgi apparatus is absent in

A. Higher plants

B. Yeast

C. Blue green algae

D. Liver cell

Answer: C



57. Membrane bound Krebs cycle enzyme is

A. Fumarase

B. Cis-aconitase

C. Succinate dehydrogenase

D. Malate dehydrogenase

Answer: C

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58. In plant cells, peroxisomes are associated with

A. Photorespiration

B. Phototropism

C. Photoperiodism

D. Malate dehydrogenase

Answer: A

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59. Golgi complex is derived from

A. Cell membrane

B. ER

C. Nuclear envelop

D. Cytoplasm

Answer: B





60. Protein tubulin is absent in

A. Flagella

B. Cilia

C. Microtubules

D. Plasma membrane

Answer: D



61. Glyoxysomes are connected with metabolism of

A. Fats

B. Protein

C. Carbohydrates

D. All of these

Answer: A

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62. Which is correctly matched ?

A. Centrosome -Enzyme for digestion

B. Lysosomes-Synthesis of amino acid

C. ER-Formation of new nuclear membrane

D. Microsomes-Photosynthesis

Answer: C



63. Mitochondrial cristae are sites of

A. Breakdown of macromolecules

B. Protein synthesis

C. Phosphorylation of flavoprotein

D. Oxidation-reduction reaction

Answer: D



64. Inner membrane convultions of a mitochondria are

known as

A. Lamellae

B. Thylakoid

C. Grana

D. Cristae

Answer: D



65. Poisons like cyanides inhibit Na^+ efflux and K^+ influx.

The effect is reversed by injection of ATP indicating that

A. $Na^+ - K^+$ pumb operates in cells

B. ATP is hydrolysed by ATPase to release energy

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

D. ATP is carrier protein

Answer: C

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66. Organelle having flattened bound cisternae and lying

near the nucleus is

A. Golgi apparatus

B. Mitochondrion

C. Centriole

D. Nucleolus

Answer: A



67. Centrioles occurs in

A. Centrosome

B. Centromere

C. Chromosome

D. Spindle fibre

Answer: A



68. Nucleoplasm is continuous with cytoplasm through

A. ER

B. Golgi apparatus

C. Centriole

D. Nuclear pore

Answer: D

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69. Nucleolus takes part in the synthesis of

A. Ribosome

B. tRNA

C. mRNA

D. DNA

Answer: A



70. Chlorophyll occurs in chloroplast

A. Stoma

B. Thylakoid membranes

C. Inner membrane

D. Inner membrane

Answer: B

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71. Rigidity of cell wall is due to

A. Cellulose

B. Pectin

C. Lignin

D. Hemicellulose

Answer: C

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72. Colour of rose petal is due to water soluble pigment present in

A. Cytoplasm

B. Intercellular spaces

C. Nucleus

D. Vacuoles

Answer: D

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73. ER of rapidly dividing cell is

A. Non functional

B. Poorly developed

C. Absent

D. Highly developed

Answer: B

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74. Site for protein synthesis

A. Pyrenoid

B. Chloroplast

C. Ribosome

D. Mitochondrion

Answer: C

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75. Series of reactions which can convert fatty acids to sugar

in plants but not in animals is

A. Krebs cycle

B. Glyoxylate cycle

C. Ornithine cycle

D. Glycolysis

Answer: B

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76. Which one does not possess histone associated DNA?

A. Chromosome

B. Mitochondria

C. Euchromatin

D. Heterochromatin

Answer: D

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77. Smaller unit in cell wall is

A. Fibril

B. Middle lamella

C. Microfibril

D. Micelle

Answer: D

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78. Cell wall possesses

A. Cellulose

B. Hemicellulose

C. Pectin

D. All of these

Answer: D





79. The site of cellular respiration

A. Nucleus

B. ER

C. Ribosome

D. Mitochondria

Answer: D



80. Which causes softening of fruits

A. polygalacturonase

B. Magnesium

C. Pectin

D. Iron

Answer: A

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81. In higher plants the cell wall consists of

A. Cellulose

B. Protein

C. Starch

D. None of the above

Answer: A



82. Phagocytosis was first seen by

A. Huxley

B. Strasburger

C. Haeckel

D. Metchnikoff

Answer: D



83. A unit membrane is absent over

A. Lysosome

B. Microbody

C. Nucleus

D. Ribosome

Answer: D

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84. A single unit membrane is present over

A. Nucleus

B. Mictochondrion

C. Lysosome

D. Chloroplast

Answer: C

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85. Main element present in middle lamella is

A. Fe^{3+}

 $\mathsf{B.}\, Ca^{2\,+}$

C. Mg^{2+}

D. K^+

Answer: B

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86. Glycolate metabolism occurs in

A. Lysosome

B. Ribosome

C. Glyoxysomes

D. Peroxisomes

Answer: D

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87. Circular DNA is present in

A. Bacteria only

B. Bacteria and Chloroplast

C. All viruses

D. Bacteria, Chloroplast and virus

Answer: A

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88. Desmosomes are concerned with

A. Cell adherens

B. Cytolysis

C. Cell division

D. Cellular excretion

Answer: A

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89. Which one is living?

A. Protoplasm

B. Nucleus

C. Cytoplasm

D. All of these

Answer: D





90. Golgi apparatus takes part in

A. Protein synthesis

B. Lipid systnesis

C. Carbohydrate synthesis

D. Oxidative photophosphorylation

Answer: C



91. Hydrolytic enzymes occurs in

A. Mitochondria

B. ER

C. Golgi apparatus

D. Lysosome

Answer: D

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92. Which one takes part in acrosome formation

A. Gogi apparatus

B. Lysosome

C. Nucleus

D. Mitochondria

Answer: A



93. Which has a single membrane covering?

A. Mesosome

B. Golgi apparatus

C. Mitochondria

D. Centrosome

Answer: B



94. Oxysomes occur in

A. Golgi body

B. Chloroplast

C. Mitochondria

D. ER

Answer: C

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95. The term thylakoid was coined by

A. Arnon

B. Park and Biggins

C. Menke

D. Willstatter

Answer: D

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96. Which one separated the mitochondrial core from outside ?

A. Outer membrane

B. Inner membrane

C. Perimitochondrial space

D. All of these

Answer: B

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97. Plasmalemma prevents escape of Na^+ and K^+ to

A. Cause disruption in neighbouring cells through

desmosomes

B. Maintains electrostatic neutrality of cells

C. Maintain cell sap

D. All of these

Answer: D

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98. Which one is different?

A. Protoplasm - Huxley

B. Cell - Schwann

C. Vitamin - Funk

D. Chromosome - Mendel

Answer: B

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99. Which cell organelle reduces the number of other organelie

A. Oxysome

B. Lysosome

C. Mitochondria

D. None of these

Answer: B



100. Thylakoid occurs inside

A. Mitochondria

B. Chloroplast

C. Golgi apparatus

D. ER

Answer: B

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101. Xanthophyll occurs in

A. Chloroplast

B. Vacuole

C. Leucoplast

D. Chromoplast

Answer: B

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102. Cell membranes occur in

A. Eukaryotes

B. Prokaryotes

C. Both in eukaryotes and prokaryotes

D. None of these

Answer: C

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103. Action potential on the outer surface of plasma membrane is

A. Neutral

B. Positive

C. Negative

D. Variable

Answer: B



104. Karyolymph is

A. Nuclear pore

B. Nuclear sap

C. Cell gap

D. None of these

Answer: B

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105. Which one does not possess RNA?

A. Plasmalemma

B. Chromosome

C. Ribosome

D. Nucleolus

Answer: D

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106. SER is associated with

A. Lysosome

B. Golgi body

C. Mitochondrion

D. Lomasome

Answer: B

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107. Protein synthesis occurs in a animal cell in

A. Cytoplasm

B. Cytoplasm as well as mitochondria

C. Ribosome attached to nuclear envelop

D. Nucleolus as well as cytoplasm

Answer: C

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108. Two animal cells are interconnected by

A. Plasmodesmata

B. Cell well

C. Desmosome

D. Plasma membrane

Answer: C





109. Fluid mosaic model differs from Robertson's model in

A. Arrangement of lipid molecules

B. Arrangement of protein

C. Number of lipid layers

D. All of these

Answer: B



110. Mitochondria increases in the cells of

A. Dormant seed

B. Dry seed

C. Ripening fruits

D. Germinating seed

Answer: D

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111. Centriole and centrosome occurs in the cells of

A. Green plant

B. Animals

C. Bacteria and cyanobacteria

D. Both 'b' and 'c'

Answer: B



112. Plasmalemma is made of

A. Single protein layer

B. Single lipid layer

C. Single lipid layer and two protein layer

D. Single protein and single lipid layer

Answer: C



113. Necleus is covered by

A. Porous double membrane

B. Porous single membrane

C. Non porous single membrane

D. Non-porous double membrane

Answer: A

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114. Solar energy is trapped by

A. Oxysomes

B. Thylakoid

C. Stroma

D. DNA

Answer: B



115. Protein synthesis occurs in

A. Mitochondria

B. Chloroplast

C. Cytoplasm

D. Ribosme

Answer: D

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116. Which one is a non living cell inclusion

A. Gogli complex

B. Centrosome

C. Vacuole

D. Ribosome

Answer: C



117. Crystals of calcium carbonate forming branches in epidermal cell

A. Cystolith

B. Raphide

C. Spheraphides

D. Otolith

Answer: A

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118. Enzyme facilitating transport across cell membrane is

A. Ligase

B. Lipase

C. Endonuclease

D. Permease

Answer: D



119. Leucoplast represent

A. Colourless plastid

B. Proplastids

C. Cell adhesive

D. Plastid with variable colour

Answer: A

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120. Membrane system considered to be extension of infolded plasma membrane

A. Golgi complex

B. Plastids

C. Mitochondria

D. ER

Answer: D

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121. Export house of cell is

A. ER

B. Golgi body

C. Nucleus

D. Lysosome

Answer: B

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122. Detoxification site in liver is

A. Free Ribosome

B. Golgi complex

C. SER

D. RER

Answer: C

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123. RNA takes part in the synthesis of-

A. DNA

B. Carbohydrate

C. Fat

D. Protien

Answer: D





124. Cell organelle covered by a single unit membrane is

A. Glyoxysomes

B. Lysosomes

C. Peroxisomes

D. All the above

Answer: D



125. Ribosome is formed of

A. RNA + Protein

B. DNA + RNA

C. DNA + Protein

D. Protein only

Answer: A

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126. Oxidative electron transport occurs in

A. Chloroplast

B. Outer membrane of mitochondria

C. Cristae

D. ER

Answer: C



127. Chloroplast of algae lack

A. Quantasome

B. Lamellae

C. Pigments

D. Grana

Answer: D



128. Racker's particles are found in

A. Nucleus

B. Mitochondria

C. Chromosomes

D. Golgi apparatus

Answer: B

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129. Strength and rigidity of cell wall is due to

A. Lignin

B. Cellulose

C. Suberin

D. Pectin

Answer: A



130. In nulticellular organisms 70S ribosomes occur inside

A. E.R.

B. Lysosome

C. Mitochondria

D. Nucleus

Answer: C

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131. Membrane most abundant in a cell is

A. E.R. membrane

B. Plasma membrane

C. Golgi membrane

D. Nuclear membrane

Answer: A

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132. Middle lamella is mainly composed of

A. Mumaric acid

B. Hemicellulose

C. Calcium pectate

D. Phosphoglycerides

Answer: C

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133. Cell theory is not applicable for

A. Fungus

B. Virus

C. Bacteria

D. Algae

Answer: B

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134. Peptide synthesis inside a cell take place in

A. Mitochondria

B. Ribososmes

C. Chloroplast

D. Chromoplast

Answer: B





135. Ribosomal RNA is activety synthesized in

A. Ribosomes

B. Nucleolus

C. Lysosomes

D. Nucleoplasm

Answer: B



136. A major site for synthesis of lipid is

A. Symplast

B. SER

C. Nucleoplasm

D. RER

Answer: B

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137. Which of the following is always absent in prokaryotic

cells ?

A. Ribosome

B. Mitochondria

C. DNA

D. Cell wall

Answer: B



138. True nucleus is absent in

A. Anabaena

B. Mucor

C. Vaucheria

D. Volvox

Answer: A



139. Which of the cell organelle is present in both eukaryotic

and prokaryotic cells?

A. Endoplasmic reticulum

B. Mitochondria

C. Nucleus

D. Ribosome

Answer: D



140. Which one of the following is stored in lysosome?

A. Secretory glycoproteins

B. Hydrolytic enzymes

C. RNA and Protein

D. Sugar, fat, ATP

Answer: B

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141. Which of the following is used in mitotic spindle poison

A. $Ca^{\,+\,2}$

B. $Mg^{\,+\,2}$

C. Tubulin

D. Colchicine

Answer: D



142. In plants both cellulose and hemicellulose are major components of which one of the following?

A. Plasma membrane

B. Cell wall

C. Nucleur membrane

D. Mitochondrial membrane

Answer: B



143. Cytoskeleton network of a cell is built by a process called

A. Triphasic polymerization

B. Biphasic polymerization

C. Treadmilling

D. Dynamic instability

Answer: D



144. Which of the following cell organelles is responsible for

extracting energy from carbohydrates to form ATP?

A. Ribosome

B. Chloroplast

C. Mitochondria

D. Lysosome

Answer: C



Choose More Than One Options

1. Which are present in plant cell ?

A. Cell wall

B. Lysosome

C. Vacuole

D. Microvili

Answer: A::C

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2. Different colours of chromoplasts are

A. Red

B. Orange

C. Yellow

D. Green

Answer: A::B::C

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3. Which are present in eukaryotic cell ?

A. Mesosome

B. Lysosome

C. Ribosome

D. Centrosome

Answer: B::C::D





4. Which are absent in prokaryotic cell?

A. Lysosome

B. Ribosome

C. Centrosome

D. Golgibody

Answer: A::C::D



5. Components of centromere are

A. Kinetochore

B. Astral ray

C. Centroplasm

D. Centriole

Answer: A::B

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6. Impeortant functions of mitrochondria are

A. Glycolysis

B. Krebs cycle

C. Oxidative phosphorylation

D. Fatty acid metabolic regulation

Answer: B::C::D



7. Lebiliser substance of lysosome are

A. Vitamin-A

B. Cholesterol

C. Cortisole

D. Progesterone

Answer: A::D



8. Example of mesokaryotic cells are

A. Peridinium

B. Noctiluca

C. Bacteria

D. Blue green algae

Answer: A::B

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9. Colourless plastids are

A. Amyloplast

B. Leueoplast

C. Chromoplast

D. Elaioplast

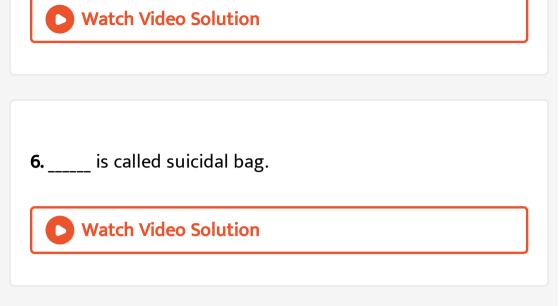
Answer: A::B::D

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Fill In The Blanks

1. The main element of cell wall of the prokaryotic cell is

2. Cell membrane is Å in thickness.
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3. The fold of inner membrane of mitochondria are called
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4. Protein synthesis is the function of
C Watch Video Solution
5. Mitochondria is called of the cell.



7. Which cell does not have perforated cell wall?

A. tracheids

B. vessels

C. sieve tubes

D. none of the above

Answer:



11. was the first to observe cell wall in dead cells of
cork.
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12. ER is associated with glycoprotein synthesis.
Vatch Video Solution
13. The contractile vacuoles play important role in
Watch Video Solution
14. The appearence of ER is dependent on the of the
cell.

Watch Video Solution
15. The golgi complex was described by in the nerve
cells of
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16. Golgi complex is found in all type of cells except some
cells such as of man.
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17. In plant cells golgi apparatus occurs is the scattered
form of many unconnected units called



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18. During spermatogenesis, the golgi apparatus gives rise
to
Vatch Video Solution
19. The ribosomes were first observed by
Vatch Video Solution
20. The principle site of ribosomal RNA in the cell is the

21. During protein synthesis mRNA gets attached to _____

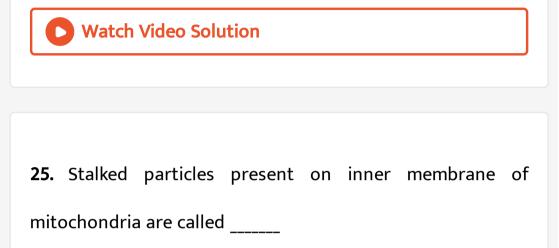
subunit of Ribosome.

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22. Each granam of chloroplast may consist of general sac
like structure called
Vatch Video Solution

23. Microbodies containing oxidating enzymes is called



24. Clusters of ribosomes found attached with mRNA threads are called _____



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True Or False Statement Questions

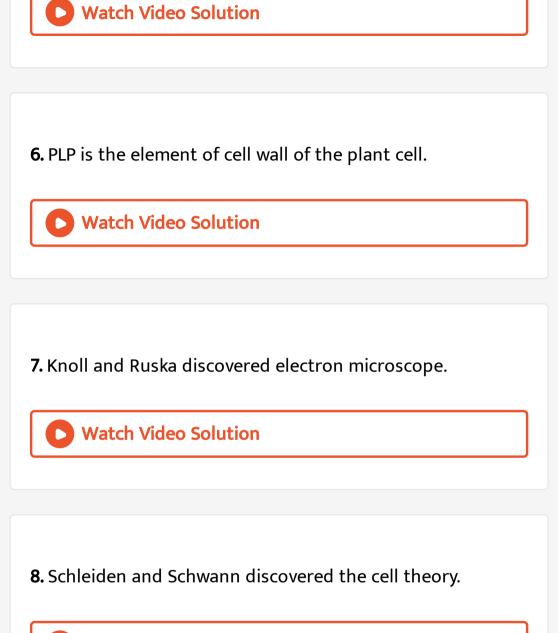
1. Zymogen granules remain in the cell of pancreas.

2. The sub-units of 70S ribosome are 40S and 60S.

Watch Video Solution
3. Lysosome controls the secretion of the cell.
Watch Video Solution
4. Star-shaped chloroplast remains in the cell of Zygnema.
Watch Video Solution

5. Singer and Nicolson discovered cytoskeleton.

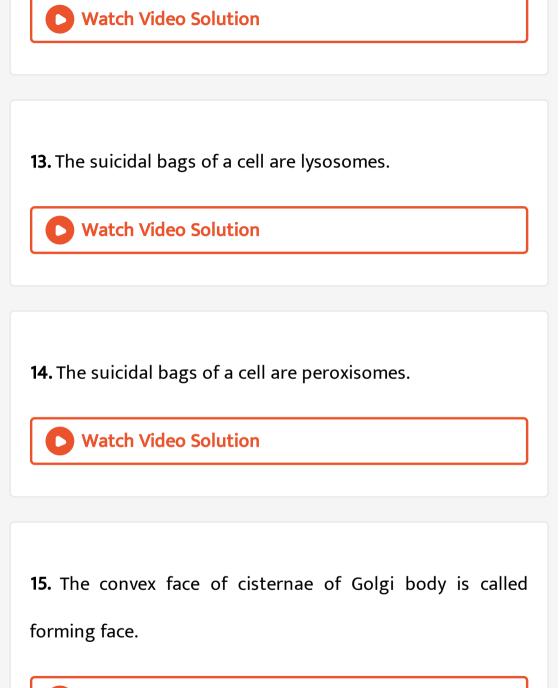




9. Primary cell wall is elastic and capable of expansion.

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10. Cellulose is a long branched chain molecule being formed of about 6000 glucose molecule.
Watch Video Solution
11. Middle lamella is made up of calcium sulphate.
Watch Video Solution

12. The lysosome were discoved by Altman.



16. Extensive infoldings of the inner membrane of mitochondria are called oxysomes.



17. Elaioplast, aleuroplast and amyloplast are three type of

leucoplast.

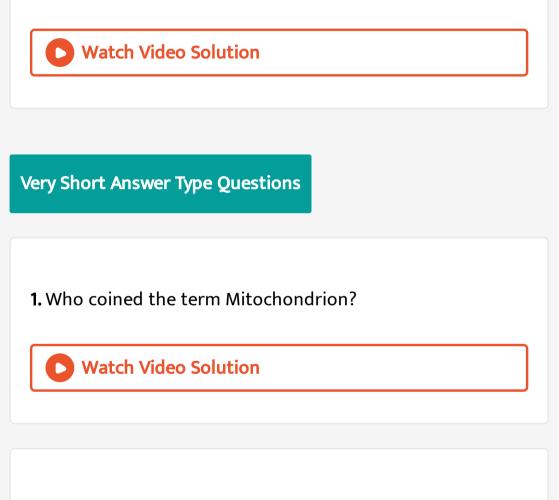


18. Centriole gives rise to basal bodies of cilia and flagella.

19. The power house of the cell is mitochondria.

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20. Internal membranes or cytomembranes are extension of
cell membrane.
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21. The walls have unit membrane structure.
Vatch Video Solution

22. All the cell organelle are bounded by the same membrane.



2. Name the organism which possesses one mitochondria.

3. Which of the mitochondrial enzymes are present in the

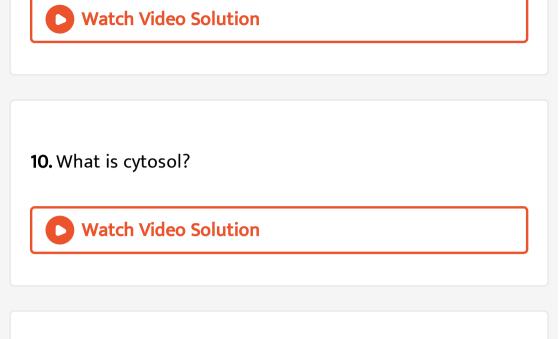
matrix?

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4. What are elementary particles?
Watch Video Solution
5. Where are the enzymes of respiratory chain of E.T.S
located in mitochondria.
Watch Video Solution

6. What is the pH of cytoplasm?

Watch Video Solution		
7. What holds the ribosomes together in a polysome?		
8. What is the role of acrosomal granule in sperm		
penetration?		

9. Name the discoverer of peroxisomes.

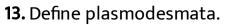


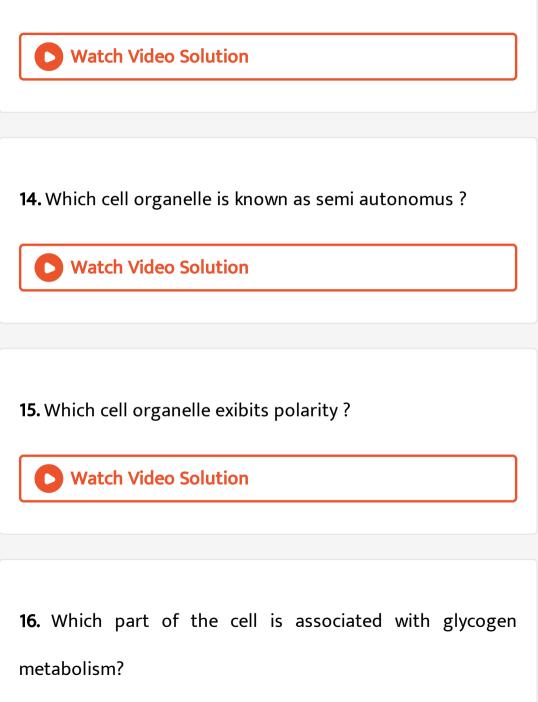
11. What are the unconnected units of golgi complex found

in plant cell?

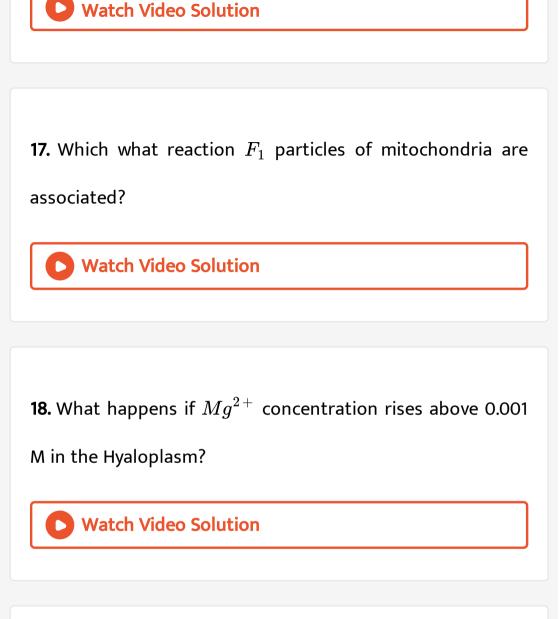
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12. Where is dynein found?









19. Which is the longest cell in plant kingdom?

20. What is the mode of origin of centriole ?

Vatch Video Solution
21. What is heterochromatin?
Watch Video Solution
22. What is the name given to the crystal deposition of
$C_a C O_a$ in the plant cell 2

 $CaCO_3$ in the plant cell ?



Short Answer Type Questions

1. Give two examples of prokaryotic cells.



2. (a) Who first showed the presence of mitochondria in living cells? (b) State its function in respiration.

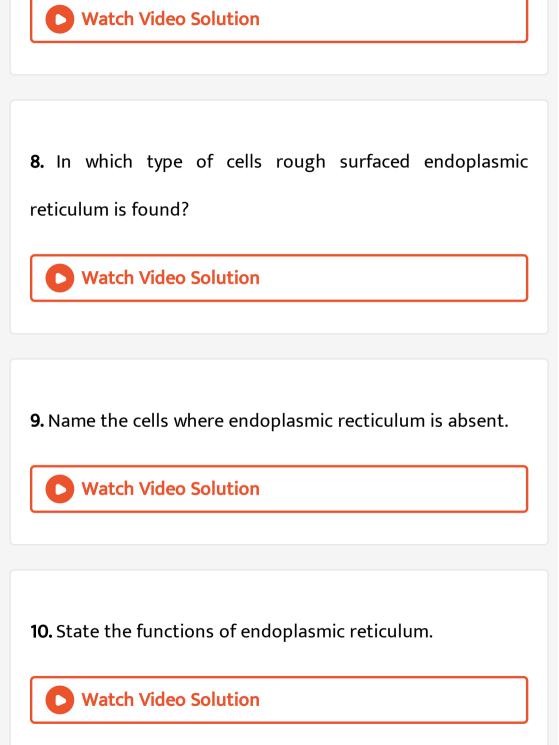
Watch Video Solution

3. Name two type of essential secretory products of protoplasm.

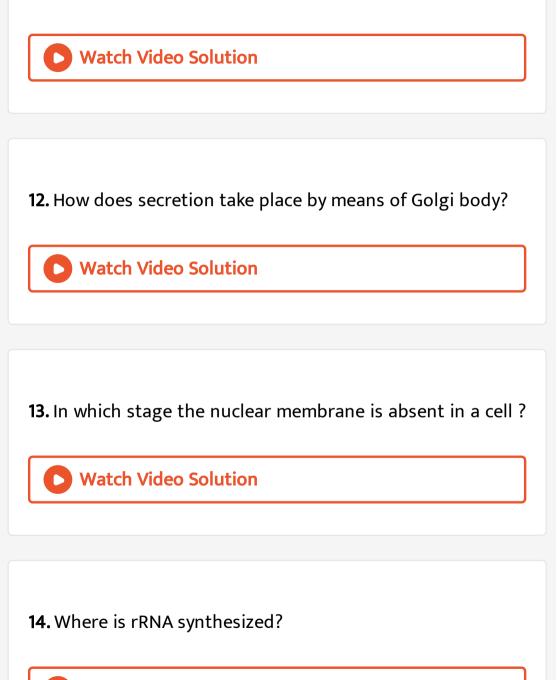


4. What is pinocytosis ?
Vatch Video Solution
5. What is rhizoplast? Where is it found?
Watch Video Solution
6. Where are the chlorophyll molecules concentrated in the chloroplasts?
Vatch Video Solution

7. Name each part of well-developed nucleus.



11. State the functions of centriole.



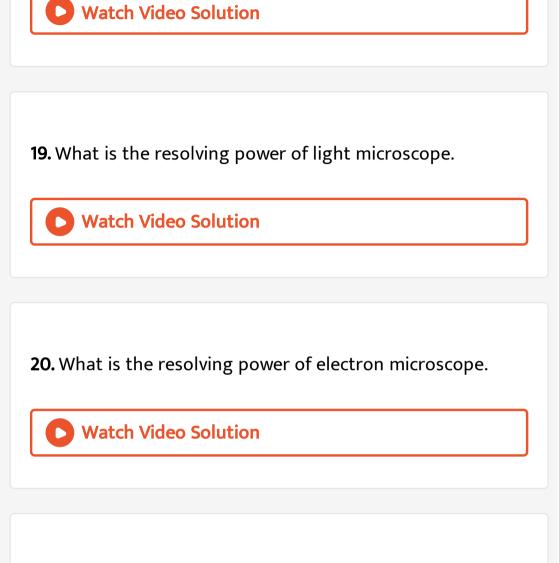
15. Where does citric acid cycle take place?

Watch Video Solution
16. Name two trace elements of protoplasm.
Watch Video Solution
17. What are the main organic compounds of protoplasm?

Watch Video Solution

18. What is the resolving power of human eye.





21. What are the smallest and largest organism on earth?

22. Define cell wall.
Watch Video Solution
23. Who first discovered / described the cell ?
Watch Video Solution
24. Name the scientist who first introduced the name cell ?
Watch Video Solution

25. What is ribosome?

26. Where is ribosome found?



27. Why does betacyanin pigment come out of beet root when warmed, but carotene from boiled carrot does not ?

Watch Video Solution

28. (a) Name the different types of RNA (b) State the functions of each.

29. What is the main function of plasma membrane?

Watch Video Solution
30. Who first discovered the Unit membrane ?
Watch Video Solution
31. Who first discovered the Mitochondria?
Watch Video Solution
32. Who first discovered the Nucleus?
Watch Video Solution

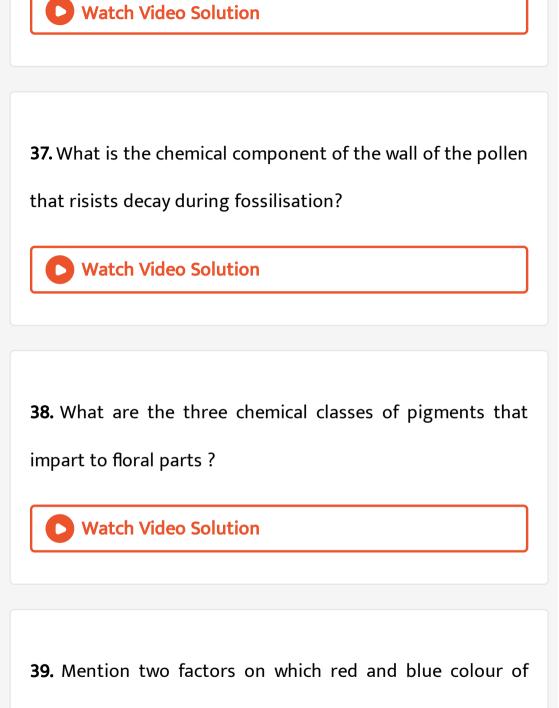
33. In 70S ribosome, what does the letter 'S' stand for ?

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34. How many membranes comprise the nuclear envelope?
Watch Video Solution
35. What are nucleosomes?



36. Who discovered electron microscope?





flowers depends.





40. State the differences between the nucleus of bacteria

and nucleus of yeast.

Watch Video Solution

41. Who discovered micorscope ?

Watch Video Solution

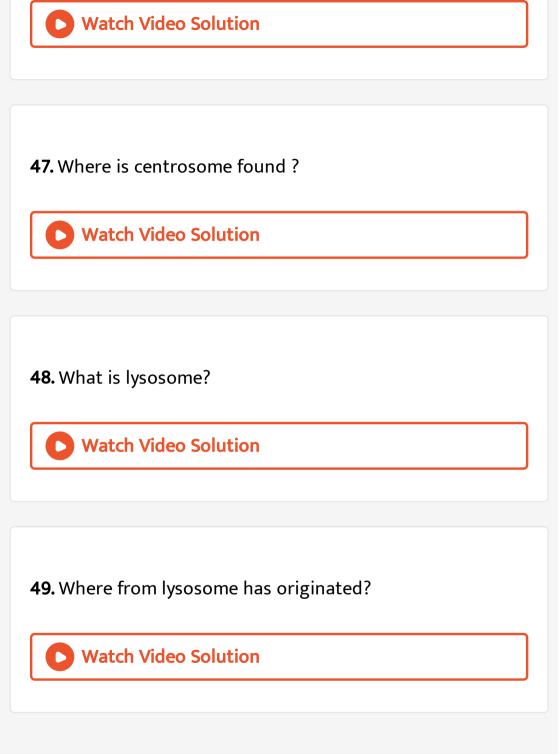
42. What is reverse pinocytosis?

43. Name two components of a bacterial cell wall which are

not present in the cell wall of higher plants.

Watch Video Solution
44. Name the internal membrane present in the prokaryotic cell.
Vatch Video Solution
45. Mention one major role of Golgi apparatus.
Vatch Video Solution

46. What is centrosome?



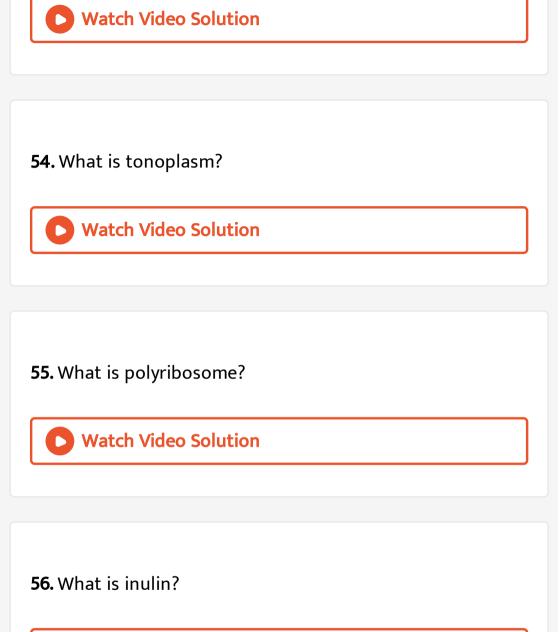
50. Mention the functions of lysosome.

Watch Video Solution
51. Name one cell organelle with single-layered membrane
and another with double-layered membrane.
Watch Video Solution

52. (a) What is rough ER? (b) Why is it so named?



53. What is pleomorphism?

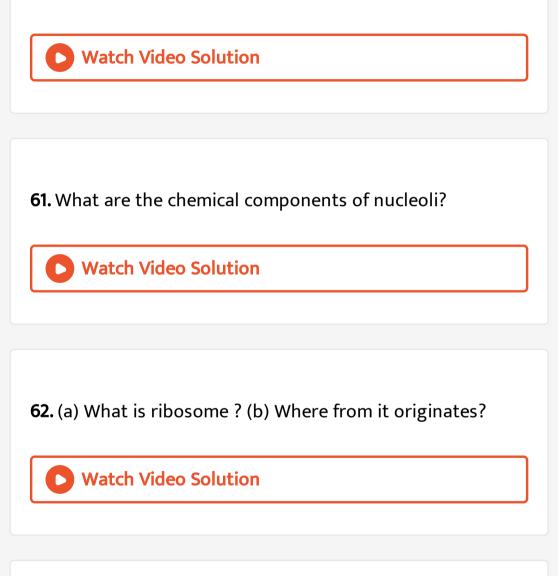


57. What is coenocyte?
Watch Video Solution
58. Mention where tonoplast is found?
Watch Video Solution
59. Which organelle connects cell membrane with nuclear
membrane?

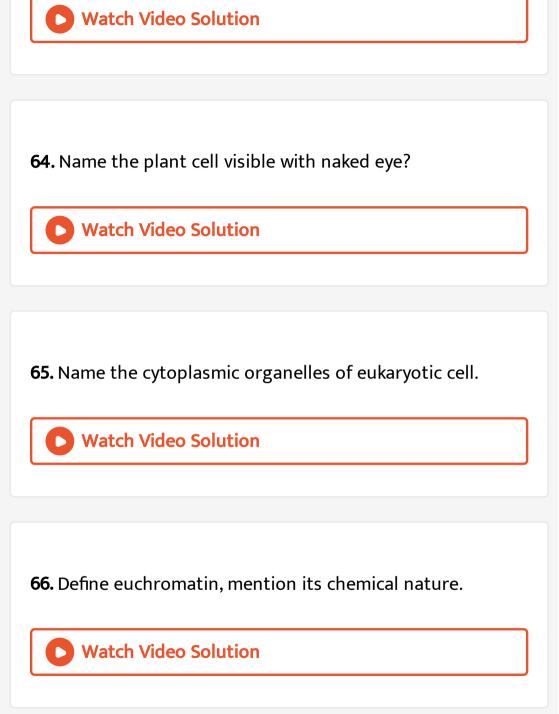


60. Name the organelle which contains enzymes responsible

for breakdown of macromolecules.



63. What do you mean by kinetosome and kinoplasm?



67. What do you mean by Autophagy?

Watch Video Solution
68. What is Glycocalyx or cell coat?
Watch Video Solution
69. What is nuclear lamina?
Watch Video Solution

70. What is plasmodesmata and state its function?

71. What is polysome?



72. Which organells is known as transducer and why it is so

called?

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73. What is 'sol' and 'gel' ?

74. What is cyclosis and how it helps a cell?

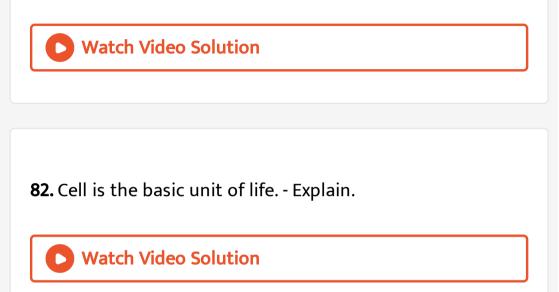
Vatch Video Solution
75. State the function of cell wall and its constituents.
Watch Video Solution
76. State the function of microbodies.
Watch Video Solution

77. What are microfilament?

78. Why lysosomes are termed 'Suicidal bags'?

Watch Video Solution
79. What is transitional vesicle of golgi body?
Watch Video Solution
80. What is vitellogenesis?
Watch Video Solution

81. Which organelle and how it is responsible for cell plate and cell wall formation.



83. What is cell theory? Who proposed cell theory? Explain

the cell theory in brief.



84. What is cell? What are the names of the smallest cell and the largest cell? Who first discovered cell? Which plant cell and animal cell are seen in the open eye?

> Watch Video Solution

85. What are prokaryotic, mesokaryotic and eukaryotic cell?

Give examples. Discuss their comparative account.



86. What is cell wall? Describe its ultra structure. What is its

function?



87. What is cell membrane? What are its structural constituents?What is the function of cell membrane? Show its difference with cell wall.

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88. What is plastid? Classify the plastid. Describe with diagram the ultra structure of a chloroplast. Show the differences between three main plastids. State the functions of plastid.

89. What is ER? Describe its ultra structure. What is its function?



90. What is G.B.? Describe its ultrastructure. What is its function? Describe its process of secretion.

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91. (a) What is mitochondria? Why it is called as "power house of cell"? Describe its ultrastructure with diagram. State the functions of mitochondria. (b) Draw a labelled diagram of mitochondrion.



92. What is ribosome? Describe its ultra structure. Why ribosome is called as "protein factory"? What is its function? What is the role of ribosome in protein synthesis?

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93. What is lysosome? Why lysosome is called as "suicidal bag"? Discuss its ultrastructure. What do you mean by polymorphism of lysosome? State the function of lysosome.



94. What is nucleus? Why is its called as "brain of the cell"? Describe its ultrastructure with diagram. What are the functions of it?

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95. What is centrosome? Describe its ultrastructure. State

the functions of centrosome.

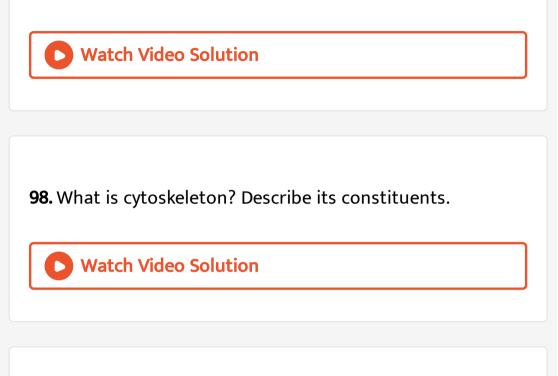


96. What are microbodies? Classify the microbodies.

Describe their ultrastructure.



97. What is microtubule? State its structure and function.



99. Describe the ultrastructure of cilia and flagella and state

their functions.



100. State the differences between prokaryotic and eukaryotic cell.



101. In which type of cell does the cell wall remain? Describe

the structure of cell wall with diagram. What is its function?

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102. State the functions of nucleus and Golgi body in brief.

103. State the difference: (i) Cell wall and cell membrane, (ii) Chloroplast and amyloplast, (iii) Starch grains and zymogen granules.

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104. Describe the structure of the nucleus of eukaryotic cell

with labelled diagram.



105. Show the differences between phagocytosis and pinocytosis.



106. Mention the structural and functional differences between Rough Endoplasmic Reticulum (RER) and Smooth Endoplasmic Reticulum (SER).

Watch Video Solution

107. How does the cell get protection from the destroying

reaction of the lysosomal enzymes? What is ribophorin?

Watch Video Solution

108. What is ribosome? Where is its origin?

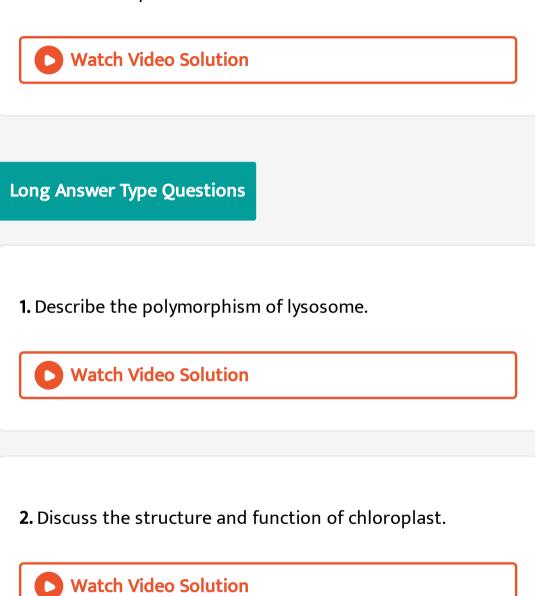
109. What are the chemical components of nucleolus?

Watch Video Solution
110. What is desmosome? What is lysosome? Mention its
function.
Watch Video Solution

111. Mention the two types of organisms containing prokaryotic cell. What are the cytoplasmic organelles of eukaryotic cell?

112. What is cytoskeleton? What is its structural unit?

Mention its importance.



3. Give the structure and function of nucleus.

Watch Video Solution
4. Give an account of the structure of mitochondria
Watch Video Solution
5. Write short notes on : (i) Glyoxysomes, (ii) Peroxisomes,
(iii) Spherosomes.

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Ncert Questions

1. Which of the following is not correct?

A. Robert Brown discovered the cell.

B. Schleiden and Schwann formulated the cell therory.

C. Virchow explained that cells are formed from pre-

existing cells.

D. A unicellular organism carries out its life activities whithin a single cell.

Answer:



2. New cells generate from

A. bacterial fermentation

B. regeneration of old cells

C. pre-existing cells

D. abiotic materials

Answer:

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3. Match the following

- (a) Cristae (i) Flat membranous sacs in stroma
- (b) Cisternae (ii) Infoldings in mitochondria
- (c) Thylakoids (iii) Disc-shaped sacs in Golgi apparatus

4. Which of the following is correct:

A. Cells of all living organisms have a nucleus.

- B. Both animal and plant cells have a well defined cell wall.
- C. In prokaryotes, there are no membrane bound organelles.
- D. Cells are formed de nova from abiotic materials.

Answer:



5. What is a mesosome in a prokaryotic cell? Mention the functions that it performs.



6. How do neutral solutes move across the plasma membrane? Can the polar molecules also move across it in the same way? If not, then how are these transported across the membrane?

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7. Name two cell-organelles that are double membrane bound. State their functions and draw labelled diagrams of

both.
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8. What are the characteristics of prokaryotic cells.
Watch Video Solution
9. Multicellular organisms have division of labour. Explain.
Vatch Video Solution

10. Cell is the basic unit of life. Discuss in brief.

11. What are nuclear pores? State their function.

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12. Both lysosomes and vacuoles are endomembrane structures, yet they differ in terms of their functions. Comment .



13. Discribe the structure of the following with the help of

labelled diagrams.

(i) Nucleus, (ii) Centrosome



14. What is a centromere? How does the position of centromere form the basis of classification of chromosomes.Support your answer with a diagram showing the position of centromere on different types of chromosomes.

