



# BIOLOGY

## BOOKS - NIKITA PUBLICATION

### Cell Structure And Organization

#### Exercise

1. The living cell first of all observed by

A. Leeuwenhoek

B. Robert Hooke

C. Schielden

D. Schwann

**Answer:**



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2. Cell theory state that

A. All cells are living

B. All cells has nucleus

C. Cells reproduce by mitosis and meiosis

D. Cells are fundamental structural unit of  
life

**Answer:**



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**3. Exceptions to cell theory is**

A. Viruses

B. Bacteria

C. Cynobacteria

D. All of these

**Answer:**



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**4.** The term protoplasm in plant cell was used  
by

A. Mohl

B. Leeuwenhoek

C. Purkinje

D. Schwann

**Answer:**



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**5. In animal cell totipotency is found in**

A. Stem cells

B. Nerve cells

C. Kidney cells

D. Heart cells

**Answer:**



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**6.** Smaller cells are very active as they have

A. Higher nucleocytoplasmic ration

B. Higher surface area per unit volume

C. Both a and b

D. None of these

**Answer:**



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7. Bacilli form of bacteria are

- A. Spherical
- B. Comma shaped
- C. Rod Shaped
- D. Twisted

**Answer:**



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8. Glycocalyx is a covering present

- A. Inside the cell wall
- B. Outside the cell wall
- C. Out side the plasma membrane
- D. Outside the cell envelope

**Answer:**



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9. In gram -ve bacteria, the stain is lost when treated with

A. Crystal violet day

B. Glycerinc

C. Alcohol

D. Iodine solution

**Answer:**



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10. Which of the following is prokaryote

A. Protista

B. Fungi

C. Bacteria

D. Algae

**Answer:**



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11. The invaginations of plasma membrane which are believed to involve in DNA replication is

- A. Mesosome
- B. Chromatophores
- C. Ribosomes
- D. Nucleoid

**Answer:**



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12. In prokaryotes, chromatophores are

A. Special granules responsible for colouration of cell

B. Inclusive bodies for metabolic activities

C. Photosynthetic pigmented bodies

D. The bodies which contain respiratory enzymes

**Answer:**



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13. Chromatophores contain which type of pigments

A. Bacteriopheophytin

B. Bacteriochlorophylls

C. Carotenoids

D. All of these

**Answer:**



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**14.** The type of ribosomes found in prokaryotic cell are

A. 60 s

B. 70 s

C. 80 s

D. 90 s

**Answer:**



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15. The extra chromosomal DNA present in bacterial cells called as

- A. Plastid
- B. Plasmid
- C. Nucleoid
- D. Extra nuclear DNA

**Answer:**



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**16.** In genetic engineering plasmids are used as

A. Passenger DNA

B. Amplifier DNA

C. Vector DNA

D. Splicing DNA

**Answer:**



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17. The word prokaryote means a cell

- A. With one nucleus
- B. With diffused nucleus
- C. With many nuclei
- D. Without chloroplast

**Answer:**



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**18.** What is the function of receptor molecules present on bacterial cell wall.

- A. To respond to chemical in their surrounding
- B. To help in movement
- C. To help in locomotion
- D. To help in osmosis

**Answer:**



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**19.** Cell organelle present in both prokaryotes and eukaryotes is

A. Lysosome

B. Chloroplast

C. Centriole

D. Ribosome

**Answer:**



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20. In prokaryotes, respiratory enzymes are located on

- A. Mitochondria
- B. Ribosome
- C. Lysosome
- D. Plasma membrane

**Answer:**



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21. On the basis of intracellular organization what are two different categories of living organisms.

A. Unicellular and multi cellular

B. Plants and animals

C. Prokaryotes and eukaryotes

D. Virus and bacteria

**Answer:**



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22. Which of the following structures is not found in a blue green cell

A. Plasma membrane

B. Cell wall

C. Nuclear envelope

D. Ribosomes

**Answer:**



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23. The strength and rigidity of a cell wall is due to the substance.

A. Suberin

B. Cellulose

C. Lignin

D. Pectin

**Answer:**



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24. Outermost layer of cell wall

- A. Primary wall
- B. Secondary wall
- C. Middle lamella
- D. Plasmalemma

**Answer:**



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25. Cell wall shows



A. Complete permeability

B. Impermeability

C. Differential permeability

D. Semipermeability

**Answer:**



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**26.** Which of the following involve in cell wall formation

A. Nucleus

B. golgi complex

C. E.R.

D. Nucleolus

**Answer:**



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**27.** Cell wall was first observed under microscope by

A. Robert Brown

B. Robert Hooke

C. Schewann

D. Danielli and Davson

**Answer:**



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**28.** Plasma membrane is made up of

A. A protein layer between two lipid layers.

B. A lipid layer between two protein layers

C. A protein, a lipid and a cellulose layer

D. A lipid, a carbohydrate and a protein layer

**Answer:**



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**29.** The term protoplasm in animal cell was used by

A. Leeuwenhoek

B. Mohl

C. Purkinje

D. Huxley

**Answer:**



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**30.** The living matter present inbetween plasma membrane and nuclear membrane is

A. Nucleoplasm

B. Cytoplasm

C. Protoplasm

D. Ectoplasm

**Answer:**



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**31. Extrinsic proteins in bilayer are**

A. Peripheral

B. loosely arranged

C. Easily removed

D. All of these

**Answer:**



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**32.** The proteins which are larger and run across the entire thickness of phospholipids are called

A. Intergral

B. Intrinsic

C. Tunnel

D. None of these

**Answer:**



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**33.** Ingestion of material by plasma membrane  
is done by



A. Pinocytosis

B. Phagocytosis

C. Endocytosis

D. Exocytosis

**Answer:**



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**34.** Selective permeable membrane allow passage of

A. Solutes only

B. Solvent only

C. Some solvent and all solutes

D. Some solutes and all solvent

**Answer:**



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**35.** In the cell membrane, integral proteins are

A. Partially attached to the surface of the membrane

B. Partially or totally buried in the membrane

C. Permanently attached to the outer surface of the membrane

D. Temporarily attached to the surface of the membrane

**Answer:**



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**36.** Which of the following is double membrane bounded cell organelle.

A. Ribosome

B. Mitochondria

C. Nucleolus

D. b and c

**Answer:**



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**37.** Infolds of inner membrane of mitochondria are called as

- A. Cristae
- B.  $F_1$  particles
- C. Mesosomes
- D. Lamillae

**Answer:**



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**38.** Electron carrier system is present

- A. One outer membrane of mitochondrion
- B. Inner membrane of mitochondrion
- C. In the matrix of mitochondrion
- D. All of these

**Answer:**



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**39.** Mitochondria will be found in abundance in cells of tissue having

- A. Minimum activity
- B. Average activity
- C. Maximum activity
- D. No activity

**Answer:**



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40. Which of the following correctly matches an organelle with its function

A. Lysosome-Secretion

B. Nucleus-Photosynthesis

C. ribosome-Lipid synthesis

D. Mitochondria-Cellular respiration

**Answer:**



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41. Outer and inner membrane of mitochondria are

A. Structurally and functionally similar

B. Structurally different but functionally similar

C. Structurally similar but functionally different

D. Structurally and functionally dissimilar

**Answer:**





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42. Oxidative enzymes mostly occur in

- A. Lysosomes
- B. Golgi bodies
- C. Mitochondria
- D. Ribosomes

**Answer:**



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**43.** E.R.is absent in

A. Mammalian RBCs

B. Ova

C. Prokaryotic cells

D. All of these

**Answer:**



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**44.** The intracellular supporting frame work of the cell is

A. Cytoplasm

B. Golgi complex

C. E.R.

D. Lysosomes

**Answer:**



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**45.** The role of SER is

- A. Detoxification
- B. Synthesis of lipids
- C. Secretion of lipids
- D. All of these

**Answer:**



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**46.** E.R. arised from

A. E.R. it self

B. Nuclear membrane

C. Golgi system

D. Cell membrane

**Answer:**



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**47. E.R. was discovered by**

A. Golgi

B. Altmann

C. Porter

D. Robertson

**Answer:**



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**48.** Golgi apparatus is which type of cell organelle

A. Non membrane bounded

B. Memberance bounded

C. Single membrane bounded

D. Double membrane bounded

**Answer:**



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**49.** Acrosome of sperm is formed by

A. E.R.

B. Lysosome



C. Golgibody

D. nucleus

**Answer:**



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**50.** In plant cell Golgi complex is called as

A. Mesosomes

B. Oxysome

C. Sphaerosomes

## D. Dictyosomes

**Answer:**



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**51.** Which of the following organelle is involved in the formation of cell plate or phragmoplast plants.

A. E.R.

B. nucleus

C. golgi apparatus

D. Lomasome

**Answer:**



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**52.** The organelle showing polarity is

A. Ribosome

B. Golgi bodies

C. Lysosomes

D. DNA

**Answer:**



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**53.** Who has made the first electron microscopic study of Golgi complex.

A. Dalton and Felix

B. Jacob and Monod

C. Bensley and Hoerr

## D. Emerson and Blinks

**Answer:**



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**54.** Leucoplasts are found in

A. Roots

B. buds

C. Leaves

D. Flowers

**Answer:**



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**55.** The site of photosynthesis is

- A. Leucoplasts
- B. Chromoplasts
- C. Chloroplasts
- D. All of these

**Answer:**



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56. The cell organelles which are known to have extranuclear DNAs

- A. Lysosomes
- B. Chloroplasts
- C. E.R.
- D. Golgi complex

**Answer:**



57. Grana and stroma lamellae occur in

- A. Ribosome
- B. Mitochondria
- C. Golgi body
- D. Chloroplast

**Answer:**





58. The term chloroplast was coined by

A. Seifriz

B. Schimper

C. Park and Pon

D. Rhodin

**Answer:**



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59. Choose the wrong matches pair

A. Amyloplasts-Starch

B. Elaioplast-Oils and fats

C. Aleuroplasts-Proteins

D. Chromoplasts-Colourless

**Answer:**



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60. The term lysosome was derived from

- A. Latin word
- B. Greek word
- C. Romen word
- D. English workd

**Answer:**



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61. The term lysosome was coined by

A. Golgi

B. Nicholom

C. Dalton

D. Duve

**Answer:**



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**62.** Lysosome is

- A. Membranous body
- B. Single membrane body
- C. Duple membrane body
- D. Naked body

**Answer:**



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**63.** Which one of the following is called a suicidal bag

A. Sphaerosomes

B. Peroxisomes

C. Lysosomes

D. Ribosomes

**Answer:**



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64. Lysosome are originated from

- A. Plasma membrane
- B. Nuclear membrane
- C. Mitochondrial membrane
- D. Golgi apparatus

**Answer:**



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**65.** Which of the following cell organelle shows polymorphism.

A. Ribosomes

B. Polysomes

C. Lysosomes

D. Plastids

**Answer:**



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66. Which of the following organelle function as trigger of cell division

A. Sphaerosome

B. Lysosome

C. Lomasome

D. Glyoxysome

**Answer:**



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67. The lysosome which contain hydrolytic enzymes but not yet involved in digestive events are called

- A. Autophagosomes
- B. Residual bodies
- C. Secondary lysosomes
- D. Primary lysosomes

**Answer:**



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**68.** Which of the following helps in removal of carcinogens.

A. Sphaerosomes

B. Lysosomes

C. Peroxisomes

D. Glycoxysomes

**Answer:**



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69. Which of the following statements is incorrect with reference to lysosome

- A. They are filled with acid hydrolase and other enzymes
- B. They are monomorphic and uniform in structure and function
- C. They may be autophagic
- D. They can digest proteins, nucleic acids, lipids and polysaccharides.

**Answer:**



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70. Which lysosomes are scavenging in function

A. Primary

B. Secondary

C. Tertiary

D. Autophagosomes

**Answer:**



71. Sphaerosomes are

- A. Naked bodies
- B. Membrane bounded
- C. Single membrane bounded
- D. Double membrane bounded

**Answer:**



72. Sphaerosomes are rich in

A. Lipids

B. Proteins

C. Carbohvdrates

D. Glycoproteins

**Answer:**



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73. What is degraded by peroxisomes

- A. Carbon dioxide
- B. Hydrogen peroxide
- C. Lithium oxide
- D. Carbon monoxide

**Answer:**



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74. Glyoxysomes occur in

- A. Both plant and animals
- B. Plant cells only
- C. Animal cells only
- D. All type of cells

**Answer:**



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75. Glycolate metabolism occurs in

A. Glyoxysomes

B. Ribosomes

C. Peroxisomes

D. Lysosomes

**Answer:**



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**76. Who discovered Ribosomes**

A. Watson

B. Talvim

C. Cowdry

D. Palade

**Answer:**



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77. Non membranous cell organelles are

A. Mitochondria

B. ER

C. Ribosome

D. Ribosome and centriole

**Answer:**



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**78.** The type of ribosome present in eukaryotic cellis

A. 80 s

B. 70 s

C. 50 s

D. 30 s

**Answer:**



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79. Polyribosomes are found in

A. 70 s type of ribosome

B. 80 s type of ribosome

C. Both a and b

D. None of these

**Answer:**



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**80.** Smallest and abundant organelle in the cells are

A. Lysosomes

B. Ribosomes

C. Microsomes

D. Glyoxysomes

**Answer:**



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81. Choose the correct statement

A. Ribosomal subunits are united during protein synthesis

B. Ribosomal subunits always remain united

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

D. All are correct statements

**Answer:**



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82. The larger sub unit in 80 s ribosome is

A. 50 s

B. 10 s

C. 60 s

D. 40 s

**Answer:**



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**83.** Centrioles are

- A. Non membrane bodies
- B. Membranous bodies
- C. Single membranous bodies
- D. Double membranous bodies

**Answer:**



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**84.** Each centriole consist of

- A. A triplet of nine microtubules
- B. A tripled of three microtubules
- C. A triplet of six microtubules
- D. Nine microtubules

**Answer:**



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**85.** Centrioles helps in

- A. Spindle formation during cell division

B. Formation of Basal bodies and fallgella

C. Formation fo spindle pole

D. All of these

**Answer:**



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**86.** Basal bodies of cilia and flagella are derived from.

A. Plasma membrane

B. Genes

C. Centrioles

D. Lysosomes

**Answer:**



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**87.** A pair of centriole is called

A. centrosome

B. Diplosome

C. Peroxysome

D. Glyoxysome

**Answer:**



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

A. Centrosphere

B. nucleus

C. Centromere

D. Centriole

**Answer:**



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**89.** The filaments present in cilia and flagella are composed of

A. Microtubules

B. Mocrofilaments

C. Microfibrils

D. Microvilli

**Answer:**



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**90.** The arrangement of central and outer microtubules in the cilium is

A.  $9 + 2$  pattern

B.  $2 + 9$  pattern



C. 9 + 0 pattern

D. 0 + 9 pattern

**Answer:**



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**91.** Regarding microtubules, all of the following statements are true except

A. They help in determine cell shape

B. They are major components of microvilli

C. They are major components of centriole

D. They are major components of cytoskeleton

**Answer:**



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**92.** Permanent vacuoles are present in

A. Prokaryotic cells

B. Eukaryotic cells

C. Plant cells

D. Animal cells

**Answer:**



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**93.** The fluid present in vacuoles is called

A. Stroma

B. Matrix

C. Sap

D. Ground substance

**Answer:**



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**94.** Turgidity in plant cells maintain by

A. Wall pressure

B. turgor pressure

C. Vacuole

D. Osmotic pressure

**Answer:**



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**95.** In plant cell minerals are stored in

- A. Peroxisome
- B. Mitochondria
- C. Golgi body
- D. Vacuole

**Answer:**



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96. Which of the following is an inclusion

A. Mitochondrion

B. Lysosome

C. Golgi complex

D. Strach grain

**Answer:**



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97. Nucleus in eukaryotic cell was discovered by

A. Robert Hooke

B. Robert Brown

C. Waldeyer

D. Hofmeister

**Answer:**



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98. Structure of nucleolus can be seen clearly during

A. Interphase

B. Prophase

C. Metaphase

D. Telophase

**Answer:**



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99. Nucleus is which type of cell organelle

- A. Membrane bounded
- B. Naked
- C. Double membrane bounded
- D. Single membrane bounded

**Answer:**



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100. Nuclear pores were first of all observed by

A. Robert Brown

B. Callan and Tomlin

C. Palade

D. Benda

**Answer:**



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**101.** Nucleoplasm also called as

A. Karyolymph

B. Nuclear sap

C. Lymph

D. a and b

**Answer:**



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**102.** Nucleolus was first discovered by

A. Palade

B. Fontana

C. Dalton

D. Waldeyer

**Answer:**



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**103. Nucleolus is**

A. Granular body

B. Naked body

C. Membrane bounded body

D. a and b

**Answer:**



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**104.** Metabolically and genetically inert region of chromatin is called

- A. Euchromatin
- B. Nuclear reticulum
- C. Heterochromation

## D. Chromatid

**Answer:**



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**105.** Which of the following statements about inclusion bodies is incorrect ?

A. They lie free in the cytoplasm

B. These represent reserve material in  
cytoplasm

C. They are not bound by any membrane

D. These are involved in ingestion of food particles

**Answer:**



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**106.** New cells generate from.



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**107.** Match the following:

**Column I**

a) Cristae

b) Cisternae

c) Thylakoids

**Column II**

i) Flat membranous sacs in stroma

ii) Infoldings in mitochondria

iii) Disc-shaped sacs in Golgi apparatus



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**108.** Growth of cell wall during cell elongation take place by.

A. Apposition

B. Intussusception



C. Both a and b

D. Super position

**Answer:**



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**109.** Plasma membrane is made up of

A. Proteins and cellulose

B. Proteins and phospholipid

C. Proteins and carbohydrates

D. Proteins, Phospholipid and some carbohydrates

**Answer:**



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**110.** Plasma membrane is fluid structure due to presence of

A. Carbohydrates

B. Lipid

C. Glycoprotein

D. Polysaccharide

**Answer:**



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**111.** Cell wall is present in

A. Plant cell

B. Prokaryotic cell

C. Algal cell

D. All of the above

**Answer:**



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**112.** Plasma membrane is fluid structure due to presence of

A. Selectively permeable

B. Permeable

C. Inpermeable

D. Semipermeable

**Answer:**



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**113.** Mitochondria DNA is

A. Naked

B. Circular

C. Double stranded

D. All of the above

**Answer:**



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**114.** Lysosomes are not helpful in

- A. Osteogenesis
- B. Cellular digestion
- C. Metamorphosis
- D. Lipogenesis

**Answer:**



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**115.** Which of the following set of organelles contain DNA

- A. Mitochondria, Peroxysome
- B. Plasma membrane, ribosome
- C. Mitochondria, chloroplast
- D. Chloroplast, dictyosome

**Answer:**



**116.** Golgi body is absent in

- A. Prokaryotes
- B. Mature mammalian RBC
- C. Eukaryotes
- D. All of the above

**Answer:**





**117.** 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:**



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**118.** 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:**



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**119.** Which one of these is not a eukaryote?

A. Euglena

B. Anabaena

C. Spirogyra

D. Agaricus

**Answer:**



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**120.** which of the following dyes is best suited for staining chromosomes?

A. Basic fuchsin

B. Safranin

C. Methylene blue

D. Carmine

**Answer:**



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

Mycoplasma

Ostrich egg

Human RBC

Bacteria

A. I, iv, iii and ii

B. I, ii, iii and iv

C. ii, I, iii and iv

D. iii, ii, I and iv

**Answer:**



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**122.** 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:**



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**123.** Who proposed the fluid mosaic model of plasma membrane?

A. Camilo Golgi

B. Schleiden and Schwann

C. Singer and Nicolson

D. Robert Brown

**Answer:**



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**124.** Which of the following statements 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 Endoplasmic Reticulum

(SER) is present

D. Secretory granules are formed in

nucleus

**Answer:**



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**125. What is a tonoplast?**

A. Outer membrane of mitochondria

B. Inner membrane of chloroplast

C. Membrane boundary of the vacuole of  
plant cells

D. Cell membrane of a plant cell

**Answer:**



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**126.** Which of the following is not true of a eukaryotic cell?

- A. It has 80S types of ribosome present in the mitochondria
- B. It has 80S types ribosome present in the cytoplasm
- C. Mitochondria contain circular DNA
- D. Membrane bound organelles are present

**Answer:**



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**127.** 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 integrated as well as loosely associated with the lipid bilayer.

D. Carbohydrates is never found in it

**Answer:**



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**128.** 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:**



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**129.** Which of the following is not a function of cytoskeleton in a cell?

- A. Intracellular transport
- B. Maintenance of cell shape and structure
- C. Support of the organelle
- D. Cell motility

**Answer:**



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**130.** The stain used to visualize mitochondria is

- A. Fast green
- B. Safranin
- C. Aceto carmine
- D. Janus green

**Answer:**



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**131.** The inherent capacity of a cell to regenerate a new whole organism is called

- A. Ontogeny
- B. Totipotency
- C. Phylogeny
- D. Pleuropotency



**Answer:**



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**132.** Spherical form of bacteria are called as

- A. Bacilli
- B. Cocci
- C. Vibrios
- D. Spirilla

**Answer:**



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**133.** One of the following generally absent in bacterial cell wall

A. Peptidoglycan

B. Cellulose

C. Murein

D. Lipid

**Answer:**



**134.** Nucleoid consists of

A. Circular DNA

B. Circular double stranded DNA

C. Single, circular, double stranded DNA

D. Single, circular, double stranded DNA

without histone protein

**Answer:**



**135.** The particles present on the surface of cristae are called as

A. Oxysomes

B.  $F_1$  particles

C. Mesosomes

D. a and b

**Answer:**



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**136.** Which of the following statement is not true

- A. Both mitochondria and chloroplast have more than one membrane
- B. Both mitochondria and chloroplast provide energy to cells in the same way
- C. Only chloroplast contain a pigment chl-II
- D. Both animal and plant cells contain mitochondria

**Answer:**



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**137.** Autonomic genome system is present in

- A. Ribosomes and chloroplast
- B. Mitochondria and ribosomes
- C. Mitochondria and chloroplast
- D. Golgi bodies and mitochondria

**Answer:**



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**138.** E.R. is

- A. Membrane bounded cell organelle
- B. Single membrane bounded cell organelle
- C. Double membrane bounded cell organelle
- D. Non membrane bounded cell organelle

**Answer:**



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**139.** The ultra structure of Golgi complex was described by

A. Golgi

B. Dalton and Felix

C. Duve

D. Singer and Nicholson

**Answer:**



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**140.** Cells with secretory function have abundant.

A. Dictyosomes

B. E.R.

C. Lysosomes

D. Osteosomes

**Answer:**



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**141.** The lysosome which are formed by the fusion of to primary lysosome with endocytosis vacuoles are called

- A. Autophagic vacuoles
- B. Heterophagic vacuoles
- C. Residual bodies
- D. None of these

**Answer:**



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**142.** Peroxisome contain the enzyme for synthesis of

A. Peroxide

B. ATP

C. Lipids

D. Proteins

**Answer:**



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**143.** The cytoplasmic area surrounding the centrioles is called.

A. Sarcolemma

B. Centrosome

C. Centromere

D. Cytosome

**Answer:**



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**144.** Match list-I and list-II and select the correct answer using code given below the list.

<b>List-I</b>	<b>List-II</b>
1. Microtubules	Structural component of cilia
2. Centrioles	Store hydrolytic enzymes
3. Peroxisomes	Store oil proteins and starch in plants

- A. 1, 2 and 3 are correct
- B. 1 and 2 are correct, 3 false
- C. 1 is correct, 2 and 3 are false
- D. 1 and 3 are correct, 2 is false

**Answer:**



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**145.** The light stained and diffused region of chromatin is called as

- A. Euchromatin
- B. Heterochromatin
- C. Chromatin network
- D. Chromosomes

**Answer:**



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**146.** Fibrous lamina is found in nucleus

- A. Outside the outer nuclear membrane
- B. Inner to inner nuclear membrane
- C. In chromatin network
- D. In nucleolus

**Answer:**



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147. Which one is apparato reticulare interno?

- A. Golgi apparatus
- B. Endoplasmic reticulum
- C. Microfilaments
- D. Microtubules

**Answer:**



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**148.** Magnification of compound microscope is not connected with

- A. Numerical aperture
- B. Focal length of object
- C. Focal length of eye place
- D. Tube length

**Answer:**



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**149.** The prokaryotic flagella possess

- A. Unit membrane enclosed fibre
- B. Protein membrane enclosed fibre
- C. 9 + 2 membrane enclosed structure
- D. Helically arranged protein molecule

**Answer:**



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150. Which of the following is correct regarding enzyme of lysosome.

A. Lysosomes enzymes beings mainly

lipolysis

B. Lysosomes enzymes involve in active

transport of molecules

C. Lysosome enzymes are rich with

polyribosomes

D. Lysosome enzymes do not digest their own membrane proteins

**Answer:**



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**151.** Organelle/organoid involved in genetic engineering is?

A. Mitochondria

B. Plasmid

C. Lysosome

D. Golgi apparatus

**Answer:**



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**152.** Cell recognition and adhesion occur due to biochemicals of cell membranes named.

A. Protein

B. Lipid

C. Protein and lipid

D. Glycoprotein and Glycolipid

**Answer:**



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**153.** Which is correct about cell theory in view of current status of our knowledge about cell structure?

A. It needs modification due to discovery of subcellular structures like chloroplast and mitochondria

B. Modified cell theory means that all living beings are composed of cells capable of reproducing

C. Cell theory does not hold good because all living being do not have cellular organization.

D. Cell theory means that all living objects consists of cells whether or not capable of reproducing.

**Answer:**



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**154.** Protein synthesis in a animal cell occurs.

A. Only on the ribosome present in cytosol



B. Only on ribosomes attached to the nuclear envelope and E.R

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

D. On ribosomes in cytoplasm as well as in mitochondria

**Answer:**



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**155.** Vacuole in plant cells.

A. Is membrane bounded and stores proteins and lipids

B. Is membrane bounded and contains water and excretory substances

C. Lacks membrane and contains air

D. Lack membrane and contains water and excretory substances

**Answer:**

---



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**156.** According to "Fluid mosaic model", cell membrane are semifluid, where lipids and integral proteins can diffuse randomly. In recent years, this model has been modified in several respects. In this regard, which of the following statements is incorrect?

A. Proteins in cell membrane can travel within the lipid layer

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:**



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## Example

1. Who observed cells under the microscope for the first time?



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2. Who made the first microscope?



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3. How do onion peel cells and our body cells differ?



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4. Why bacterial nucleus is said to be primitive?



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5. How do a combination of lenses helps in higher magnification?



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6. Why do basal body of bacterial flagella considered as smallest motor in the world?



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7. Why mitochondria are called as power house of cell chamber



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8. Are mitochondria present in all eukaryotic cells?



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**9.** Are mitochondria present in all eukaryotic cells?



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**10.** Why nucleus is considered as control unit of a cell.



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**11.** Can cells like Xylem or mature human RBCs called living?



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**12.** What is a syncytium and coenocyte?



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**13.** Plants have no circulatory system? Then how cells manage intercellular transport?



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**14.** Is nucleolus covered by membrane?



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**15.** Fluid mosaic model proposed by Singer and Nicolson replaced Sandwich model proposed by Danielli and Davson? Why?



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**16.** The RBC surface normally shows glycoprotein molecules. When determining blood group do they play any role?



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**17.** How cytoplasm differs from nucleoplasm in chemical composition?



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**18.** What is the significance of vacuole in a plant cell?



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**19.** What does 'S' refer in a 70S and an 80S ribosome?



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**20.** Mention a single membrane bound organelle which is rich in hydrolytic enzymes.



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**21.** What are gas vacuoles? State their functions?



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**22.** What is the function of a polysome?



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23. Distinguish between smooth and rough endoplasmic reticulum.



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24. Mitochondria are power house of cell.  
Given reason.



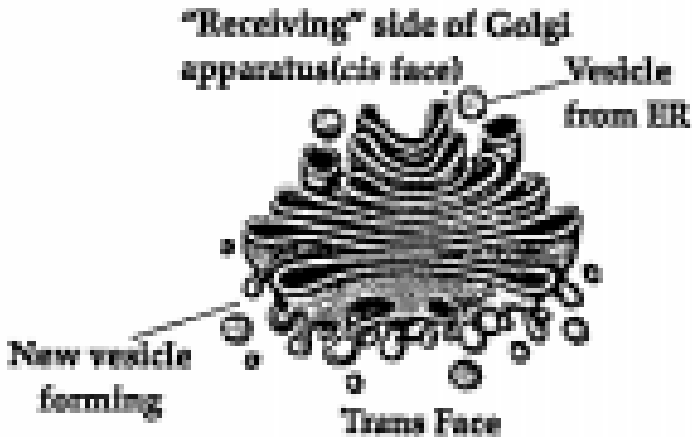
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25. What are types of plastids?



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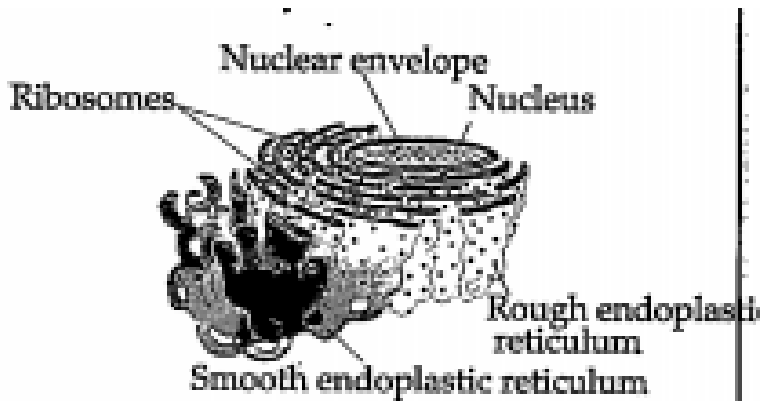
26. Label the diagrams and write down the details of concept in your word.



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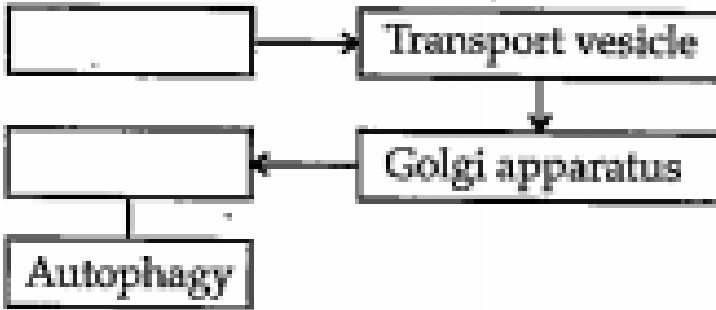


27. Label the diagrams and write down the details of concept in your word.



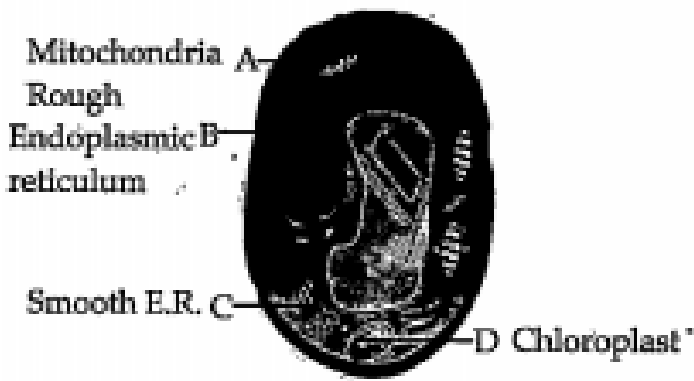
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28. Complete the flow chart.



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29. Label the A, B, C, and D in above diagram and write the functions of organelles A and B.



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30. Identify each cell structures or organelle from its description below:

Manufactures ribosome.



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**31.** Identify each cell structures or organelle from its description below:

Carrys out photosynthesis.



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**32.** Identify each cell structures or organelle from its description below:

Can bud of vesicle from which form Golgi apparatus.



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**33.** Identify each cell structures or organelle from its description below:

Manufacture ATP in animal and plant cells.



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**34.** Identify each cell structures or organelle from its description below:

Selective permeable.



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**35.** Onion cells have no chloroplast. How can we tell they are plants?



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**36.** Discuss briefly the role of nucleolus in the cells actively involved in protein synthesis.



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**37.** Explain the association of carbohydrate to the plasma membrane and its significance.



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**38.** Comment on the cartwheel structure of centriole.



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**39.** Briefly describe the cell theory.



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**40.** Differentiate between Rough Endoplasmic Reticulum (RER) and Smooth Endoplasmic Reticulum (SER).



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**41.** Give the biochemical composition of plasma membrane. How are lipid molecules arranged in the membrane?







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**42.** What are plasmids? Describe their role in bacteria.



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**43.** What are histones? What are their functions?



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**44.** What structural and functional attributes must a cell have to be called a living cell?



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**45.** Briefly give the contributions of the following scientists in formulating the cell theory

Robert Virchow



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**46.** Briefly give the contributions of the following scientists in formulating the cell theory

Schleiden and Schwann



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**47.** Is extra genomic DNA present in prokaryotes and eukaryotes? If yes, indicate their location in both the types of organisms.



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**48.** Structure and functions are correlatable in living organisms. Can you justify this by taking plasma membrane as an example?



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**49.** Eukaryotic cells have organelles which may (a) not be bound by a membrane (b) bound by a single membrane (c) bound by a double membrane Group the various subcellular organelles into these three categories.



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50. which Eukaryotic cells have organelles which may bound by a single membrane



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51. which Eukaryotic cells have organelles which may bound by a double membrane





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**52.** The genomic content of the nucleus is constant for a given species whereas the extra chromosomal DNA is found to be variable among the members of a population. Explain.



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**53.** Mitochondria are power house of cell. Given reason.



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**54.** Is there a species specific or region specific type of plastids? How does one distinguish one from the other?



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**55.** Write the functions of the following:

Centromere



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**56.** Write the functions of the following:

Cell wall



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**57.** Write the functions of the following:

Smooth ER



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**58.** Write the functions of the following:

Golgi apparatus



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**59.** Write the functions of the following:

Centrioles



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**60.** Are the different types of plastids interchangeable? If yes, give examples where they are getting converted from one type to another.



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**61.** What is mesosome in a prokaryotic cell?



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**62.** 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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**63.** Name two cell-organelles that are double membrane bound. What are the characteristics of these two organelles? State

their functions and draw labelled diagrams of both.



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**64.** What are the characteristics of prokaryotic cells?



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**65.** Multicellular organisms have division of labour. Explain.



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**66.** Cell is the basic unit of life. Discuss in brief.



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**67.** What are nuclear pores? State their function.



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



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**69.** Describe the structure of the following with the help of labelled diagrams.

Nucleus



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**70.** Describe the structure of the following with the help of labelled diagrams.

Centrosome



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