



# BIOLOGY

## BOOKS - MBD BIOLOGY (ODIA ENGLISH)

### THE CELL

#### Question Bank

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

A. Glycolipids

B. Proline

C. Phospholipids

D. Cholestrol

**Answer: B**



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**2. The mineral present in cell wall is:**

A. Na

B. Ca

C. K

D. Mg

**Answer: B**



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**3. Fluid mosaic model was proposed by:**

A. Singer and nicolson

B. Davidson and Danielli

C. Robertson

D. Watson and crick

**Answer: A**



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**4.** Most of the cell membranes are principally composed of :

A. Protein

B. Lipid

C. protein and lipid

D. Cellulose

**Answer: C**



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**5. Most abundant lipid in cell membrane is:**

A. Phospholipid

B. Starch

C. Oil

D. Sulpholipid

**Answer: A**



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6. In which method of transport in plasma membrane does not require carrier molecule?

A. Active transport

B. Facilitated diffusion

C. simple diffusion

D. Na K pump

**Answer: C**



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7. Which statement is incorrect for ion channels?

A. They are proteins

B. Movement through them is simple diffusion

C. Movement through them is from high to low concentration

D. All ions pass through the same type of channel

**Answer: D**



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8. In  $Na^+K^+$  pump of active transport there is:



A. Efflux of  $Na^+$  and influx of  $K^+$

B. Influx of  $Na^+$  and efflux of  $K^+$

C. Only efflux of  $Na^+$

D. Influx and efflux of  $Na^+$  only

**Answer: A**



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**9.** Simultaneous movement of two molecules across a membrane in the same direction is known as:

A. Antiport

B. Symport

C. Uniport

D. None of these

**Answer: B**



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**10. Active transport is transport :**

A. Require special membrane proteins

B. Highly selective

C. Requires ATP energy

D. All of the above

**Answer: D**



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**11.**  $Na^+ / K^+$  pump in a cell is a example of:

A. Osmosis

B. Diffusion

C. Passive transport

D. Active transport

**Answer: D**



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**12. Structural lipids of cell membrane are:**

A. Simple lipid

B. Chromolipids

C. Steroid

## D. Phospholipids

**Answer: D**



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**13.** Which of the following components helps in building up of plasma membrane?

A. Protein, Vitamin, Lipid

B. Lipid, Mineral, protein

C. Protein , Lipid, Carbohydrate

D. Protein, lipid

**Answer: C**



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**14. Sphaerosomes contain:**

A. Cellulose reserve

B. Protein reserve

C. Lipid reserve

D. Both protein and lipid

**Answer: B**



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**15. Polymorphic cell organelle is:**

- A. Glyoxysome
- B. Lysosome
- C. Golgi complex
- D. Peroxisome

**Answer: A**



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**16.** Which type of membrane is most abundant within a cell?

- A. ER membrane
- B. Nuclear membrane
- C. Golgi membrane
- D. Plasma membrane

**Answer: C**





17. Plasmodesmata is:

- A. Locomotory structure
- B. Membrane connecting the nucleus with  
plasmalemma
- C. Connections between adjacent cells
- D. Lignified cemented layers between cells

**Answer: C**



**18.** Middle lamella is composed mainly of:

- A. Muramic acid
- B. Calcium pectate
- C. phosphoglycerides
- D. Hemicellulose

**Answer: B**



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19. Cytoskeleton is made up of:

- A. Callose deposits
- B. Cellulosic microfibrils
- C. Proteinaceous filaments
- D. Calcium carbonate granules

**Answer: C**



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20. Resin and turpentine are products of:

A. Teak

B. Oak

C. Eucalyptus

D. Pine

**Answer: D**



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**21. Tonoplast is the membrane covering of:**

A. Mitochondria

B. Vacuole

C. Chloroplast

D. Ribosome

**Answer: B**



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**22. Chromosome is made up of:**

A. DNA+ Pectin

B. RNA+DNA

C. DNA+Histone

D. Only histone

**Answer: C**



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**23.** A typical nucleosome contains:

A. 100 bp of DNA Helix

B. 200 bp of DNA Helix

C. 300 bp of DNA Helix

D. 400 bp of DNA Helix

**Answer: B**



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**24. Which of these is wrongly matched?**

A. Chloroplast-Chlorophyll

B. Elaioplasts-starch

C. Chromoplasts-carotenoids

D. Amyloplasts-carbohydrates

**Answer: B**



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**25. 70S Ribosomes is seen in:**

- A. Bacterial cell
- B. Mitochondria
- C. Both(a)and(b)
- D. ER

**Answer: C**





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26. Mitochondria are semi autonomous as they posses:

A. DNA

B. DNA+RNA

C. DNA+RNA+Ribosomes

D. Protein

**Answer: C**



27. The 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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28. The cytoplasm of adjacent plant cells is connected to each other by:

- A. Plasmalemma
- B. Desmosome
- C. Plasmodesmata
- D. Plasmotubule

**Answer: C**



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

A. Golgi complex

B. Peroxisome

C. ER

D. Lysosome

**Answer: B**





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**30.** Protein synthesis inside a cell takes place in:

- A. Chloroplast
- B. Mitochondria
- C. Chromoplast
- D. Ribosome

**Answer: D**



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**31.** What are the structures called that given an appearance as "beads-on-string" in the chromosomes when viewed under electron microscope?

A. Genes

B. Nucleotides

C. Nucleosomes

D. Base pairs

**Answer: C**



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**32.** Example of water soluble plant pigment is:

A. Chlorophyll-a

B. Chlorophyll-b

C. Anthocynin

D. Xanthophyll

**Answer: C**



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**33.** Middle lamella is composed mainly of:

A. Calcium carbonate

B. Cellulose

C. Calcium pectate

D. Lignin

**Answer: C**



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**34.** Important sites for the formation of glycoproteins and glycolipids is:

A. Vacuole

B. Golgi apparatus

C. Plastid

D. Lysosome

**Answer: B**



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35. 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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**36.** Prokaryotic genetic system contain:

- A. DNA and Histone
- B. DNA without Histone
- C. Histone but no DNA
- D. Neither Dna nor Histone

**Answer: B**



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**37.** Protein packaging cell organelle is:

A. Golgi body

B. ER

C. Lysosome

D. Ribosome

**Answer: A**



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**38.** Nucleolus takes part in synthesis of :

A. mRNA

B. tRNA

C. rRNA

D. Protein

**Answer: C**



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**39.** Enzymes associated with conversion of fats and carbohydrates are located in:

A. Lysosome

B. Liposome

C. Peroxisome

D. Glyoxysome

**Answer: D**



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**40.** The potential of plant cell to develop into a full plant is:

- A. Omnipotency
- B. Totipotency
- C. pleuripotency
- D. None of the above

**Answer: B**



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41. Membraneless cell organelle is ,

A. Nucleus

B. Lysosome

C. Peroxisome

D. Ribosome

**Answer: D**



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**42. Microtubules takes part in:**

- A. Muscle contraction
- B. Secretion
- C. Cell division
- D. Cell wall architecture

**Answer: C**



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**43.** Mitochondria are semi autonomous as they possess:

A. DNA

B. DNA and RNA

C. DNA, RNA and ribosomes

D. Proteins

**Answer: C**



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**44.** Which is not a part of cell membrane?

A. Protein

B. Lipid

C. Carbohydrate

D. nucleic acid

**Answer: D**



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**45.** Middle lamella is composed mainly of:

A. Ca carbonate

B. Ca pectate

C. Cellulose

D. Hemicellulose

**Answer: B**



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**46. Microtubules takes part in:**

A. Muscle contraction

B. Cell division

C. DNA replication

D. All of these

**Answer: B**



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**47.** SER is mainly found in cells actively engaged in:

A. Protein synthesis

B. DNA synthesis

C. Lipid synthesis

D. Secretion

**Answer: C**



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**48.** Mitochondria, ribosome and lysosome respectively, are covered by :

A. Double ,single and no membrane

B. NO single and double membranes

C. single, double and no membrane

D. Double no and single membrane

**Answer: D**



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**49. Centre of phosphorylation is:**

A. peroxisome

B. Ribosome

C. Oxysome

D. Centrosome

**Answer: C**



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**50. Which is adjacent to plasma membrane?**

A. Middle lamella

B. Tonoplast

C. Primary wall



D. Secondary wall

**Answer: D**



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**51.** Phenomenon of differential staining of chromatin.

A. Heteropycnosis

B. Heterochromatin

C. Heterochromatinization

D. Eucromatin

**Answer: A**



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**52.** In chloroplasts chlorophyll is located at:

A. Outer membrane

B. Inner membrane

C. Stroma

D. Grana

**Answer: D**



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**53.** An exception to cell theory is:

A. Virus

B. Bacteria

C. Mycoplasma

D. All of these

**Answer: A**



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54. Nucleolar organiser is:

A. Nucleolus

B. Nucleosome

C. Primary constriction

D. Secondary constriction

**Answer: D**



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**55.** Smallest unit of cell wall is:

A. Microtubule

B. Fibril

C. Microfibril

D. Micelle

**Answer: B**



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56. The red colour of beet root is due to:

A. Chloroplast

B. Chromoplast

C. Leucoplast

D. Betalain

**Answer: B**



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57. Cell drinking is:

A. Exocytosis

B. Endocytosis

C. Phagocytosis

D. Pinocytosis

**Answer: D**



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58. \_\_\_\_\_ is present in between two adjacent plant cells.



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59. Continuity of protoplasm between cells is maintained by\_\_\_\_\_



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60. Lightly stained regions of chromatin is called\_\_\_\_\_



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61. Foldings of inner membrane of mitochondria are called\_\_\_\_\_



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62. \_\_\_\_\_ is called suicidal bag of the cell.



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63. Amyloplasts are connected with storage of \_\_\_\_\_



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64. Omnis cellula e cellulae was proposed by \_\_\_\_\_



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65. Prokaryotic ribosome is \_\_\_\_\_ type.



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66. The coloured pigment anthocyanin is found inside \_\_\_\_\_



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67. The major structural protein of chromosome is \_\_\_\_\_





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**68.** Shape of the chromosome is determined by the position of\_\_\_\_\_



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**69.** Diffusion and osmosis are included under\_\_\_\_\_transport.



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70. The function of contractile vacuole is \_\_\_\_\_



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71. The packing unit of chromosomes is \_\_\_\_\_



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72. Process of self-destruction of cell by release of lysosome enzymes in the cell itself is called \_\_\_\_\_



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73. The two thread-like strands of the chromosome held together by centromere are called\_\_\_\_\_



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74. \_\_\_\_\_is the technique of seperation of sub-cellular particles.



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**75.** Stack of vesicles inside the chloroplast.



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**76.** Phenomenon of differential staining of chromatin.



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**77.** Darkly stained region of chromatin.



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**78.** Homogenous clear region of protoplasm.



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**79.** Tonoplast is the membrane covering of:



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**80.** The ground substance of chloroplast.



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**81.** Single membraned vesicular cell organelles with different enzymes.



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**82.** Starch-storing plastid is called as.



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**83.** Osmotic inflow of water inside the cell.





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**84.** Streaming movement of cytoplasm.



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**85.** Who discovered cell?



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**86.** Omnis cellula e cellulae was proposed by\_\_\_\_\_



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**87.** The famous cell theory was proposed by



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**88.** In which plant steward proved cellular totipotency?



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**89.** Membrane bound organelles are absent in which type of cells?



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**90.** Secondary cell wall grows by:



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**91.** Cell plate is formed of smaller units called\_\_\_\_\_



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**92.** Sandwich model of plasma membrane was proposed by.



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**93.** Fluid mosaic model was proposed by:



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**94.** What are the two types of proteins present in plasma membrane?



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**95.** Which compounds are responsible for cell recognition?



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**96.** What are the three types of transport of molecules through plasma membrane?



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**97.** What is phagocytosis ?



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**98.** The highly structured three-dimensional network of protein fibrils in cytoplasmic matrix

is called.



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**99.** The two motor proteins associated with microtubule are.



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**100.** Membranes of ER and other cell organelles interconnected to form a system known as \_\_\_\_.





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**101.** Which compound gives rigidity to cell wall ?



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**102.** The function of contractile vacuole is \_\_\_\_\_



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**103.** Which organelles are ribonucleoprotein particles?



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**104.** DNA molecules of plastids are called.



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**105.** What are the two types of vesicles associated with golgi body ?



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**106.** Which protein is present on coated vesicles ?



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**107.** What types of enzymes are present in lysosomes?



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**108.** Name two semi-autonomous organelles



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**109.** What are the three types of leucoplasts ?



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**110.** Who coined the term chromosome ?



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**111.** What is absent in prokaryotic chromosome ?



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**112.** What is the fundamental packing unit of DNA ?



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**113.** Write short note on Ribosome





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**114.** Write short note on Mitochondria



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**115.** Write short note on Chloroplast



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**116.** Write short note on Cell wall





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**117.** Write short note on Lysosome



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**118.** Write short note on Cytoplasm



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**119.** Write short note on peroxisome





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**120.** Write short note on Chromosome



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**121.** Write short note on Nucleosome



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**122.** Distinguish between Prokaryotic and eukaryotic cell



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**123.** Distinguish between Primary and secondary cell wall



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**124.** Distinguish between Plasma membrane and nuclear membrane



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**125.** Distinguish between Smooth and rough endoplasmic reticulum



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**126.** Distinguish between Nucleus and chromosome



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**127.** Distinguish between Cilia and flagella



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**128.** Distinguish between peroxisome and glyoxysome



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**129.** Distinguish between Nucleus and nucleolus



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**130.** Distinguish between Heterochromatin and euchromatin



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**131.** Distinguish between Chromosome and chromatid



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**132.** Give an account of ultra-structure of a typical plant cell.



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**133.** Draw a neat labelled diagram Of a typical plant cell and mention the differences between prokaryotic and eukaryotic cells.



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**134.** Give an account of typical animal cell.



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**135. WRITE NOTES ON:(a) fluid mosaic model(b)**

**Chromosomes**



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