



## BOTANY

1. Which of the following is associated with detoxification of drugs and muscle contraction by the release and uptake of  $\text{Ca}^{2+}$  ions?  
(1) Golgi complex  
(2) RER  
(3) SER  
(4) Free ribosomes
2. How many organelles of a eukaryotic cell are considered to have an independent existence during early events of evolution?  
(1) 1                                      (2) 2  
(3) 3                                      (4) 4
3. Which of the following statements about plastids is incorrect?  
(1) Plastids are pigment containing organelles found in all plant cells and in Euglenoids  
(2) Chloroplast is double membrane bound, with the inner chloroplast membrane being more permeable  
(3) Chromoplast is responsible for giving colour to fruits and flowers  
(4) The number and shape of chloroplasts is variable
4. Which of the following statement is incorrect about golgi apparatus?  
(1) It helps in recycling of the plasma membrane, pinched off by pinocytosis and phagocytosis  
(2) Secretion is the main function of the golgi complex  
(3) It helps in glycosidation and glycosylation of lipids and proteins  
(4) Golgi body helps in animal cytokinesis
5. Certain golgian vesicles, which are budded out from the trans-face contains acid hydrolases. Such vesicles are better termed as  
(1) Heterophagosomes  
(2) Microsomes  
(3) Phragmosomes  
(4) Primary lysosomes
6. In plants, the tonoplast facilitates the transport of a number of ions and other materials  
(1) Against concentration gradient into vacuole  
(2) Along concentration gradient into vacuole  
(3) Along concentration gradient into gas vacuoles  
(4) Against concentration gradient in contractile vacuole
7. Mitochondria and chloroplasts are semi-autonomous as they possess  
(1) DNA  
(2) DNA + RNA  
(3) DNA + RNA + ribosomes  
(4) Proteins
8. Which of the following statement is incorrect w.r.t. lysosomes?  
(1) Lysosomes are simple tiny spherical sac-like structures  
(2) They are distributed in the cytoplasm of the cell  
(3) The enzymes of lysosomes work in basic condition  
(4) The enzymes of lysosomes are synthesised by RER
9. Which of the following cell organelles is involved in the synthesis of the cell organelle that contains hydrolytic enzymes?  
(1) Mitochondrion    (2) Golgi apparatus  
(3) Plastids                      (4) Nucleus
10. Which of the following vacuoles help in osmoregulation in *Amoeba*?  
(1) Gas vacuoles  
(2) Food vacuoles  
(3) Contractile vacuoles  
(4) Sap vacuoles
11. The vacuoles which help in the digestion of food particles engulfed by protists are  
(1) Contractile vacuoles  
(2) Gas vacuoles  
(3) Sap vacuoles  
(4) Food vacuoles



- 12.** Which of the following stain is used to observe mitochondria?  
(1) Methylene blue (2) Safranin  
(3) Janus green (4) Gram stain
- 13.** Which of the following cell organelle is known as powerhouse of the cell?  
(1) Golgi apparatus (2) ER  
(3) Lysosome (4) Mitochondrion
- 14.** The inner membrane of mitochondria forms a number of infoldings called  
(1) Cisternae (2) Cristae  
(3) Microtubules (4) Mesosomes
- 15.** The type of ribosomes found inside the mitochondria is  
(1) 90 S (2) 60 S  
(3) 80 S (4) 70 S
- 16.** The plastids which store proteins are  
(1) Aleuroplasts (2) Elaioplasts  
(3) Amyloplasts (4) Chromoplasts
- 17.** Which of the following plastid is coloured and contains carotenoids?  
(1) Aleuroplast  
(2) Elaioplast  
(3) Amyloplast  
(4) Chromoplast
- 18.** Which type of plastid contains chlorophyll and responsible for photosynthesis?  
(1) Chloroplast (2) Chromoplast  
(3) Aleuroplast (4) Elaioplast
- 19.** The orange colour of carrot root is due to the presence of  
(1) Aleuroplast (2) Elaioplast  
(3) Chromoplast (4) Amyloplast
- 20.** Thylakoids are present in  
(1) Mitochondria (2) Vacuoles  
(3) Chloroplast (4) Ribosomes
- 21.** The nucleus was discovered by \_\_\_\_\_ in \_\_\_\_\_.  
(1) Robert Hooke, 1931  
(2) Anton van Leeuwenhoek, 1906  
(3) Robert Brown, 1831  
(4) Schleiden, 1981
- 22.** What is common in mitochondria, chloroplast and nucleus?  
(1) They are double membrane bound organelles  
(2) They are single membrane bound organelles  
(3) They are included in endomembrane system  
(4) They have 80S ribosomes.
- 23.** Select the incorrect statement w.r.t. mitochondria  
(1) They divide by fission  
(2) The matrix possesses single circular DNA  
(3) The cristae decrease the surface area  
(4) They produce cellular energy in the form of ATP
- 24.** Which of the following organelles show polymorphism?  
(1) Golgi apparatus (2) Lysosome  
(3) Mitochondria (4) Chloroplast



## ANSWER KEY

1. (3)
2. (2)
3. (2)
4. (4)
5. (4)
6. (4)
7. (3)
8. (3)
9. (2)
10. (3)
11. (4)
12. (3)

13. (4)
14. (2)
15. (4)
16. (1)
17. (4)
18. (1)
19. (3)
20. (3)
21. (3)
22. (1)
23. (3)
24. (2)



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