



Delhi Public School, Howrah

QUESTION BANK FOR CLASS IX SUBJECT-BIOLOGY TOPIC-THE FUNDAMENTAL UNIT OF LIFE

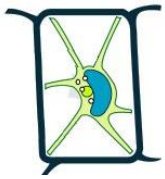
1. Name an organelle which maintains the turgidity and rigidity of mature plant cells.
2. Name the cell organelle that detoxifies poisons and drugs into liver of vertebrates.
3. Name the plastid involved in conversion of a green brinjal to violet.
4. Name a cell organelle which lacks membrane. Where is it prepared?
5. Which part of the plant cell permits it to withstand very dilute external medium without bursting?
6. When do chromatin fibres organize themselves into chromosomes?
7. Which type of animal cell lacks both mitochondria and endoplasmic reticulum?
8. Which is the only cell organelle visible in a prokaryotic cell?
9. A person takes concentrated solution of salt, after sometime, he starts vomiting. What is the phenomenon responsible for such situation?
10. Write two similarities and one dissimilarity between mitochondria and plastid.
11. Two beakers A and B contain plain water and concentrated sugar solution respectively. Equal number of dry raisins are kept in them for a few hours and then taken out.
 - (i) Explain the reason for the difference in the physical appearance of raisins which were taken out of the two beakers.
 - (ii) On the basis of above observation, categorise the two solutions as hypotonic and hypertonic.
12. Take four peeled potato halves and scoop each one out to make potato cups. One of these potato cups should be made from a boiled potato. Put each potato cup in a trough containing water. Now,
 - (a) Keep cup A empty.
 - (b) Put one teaspoon sugar in cup B
 - (c) Put one teaspoon salt in cup C
 - (d) Put one teaspoon sugar in the boiled potato cup D.keep these for two hours. Then observe the four potato cups and answer the following questions.
 - (i) Explain why water gathers in the hollowed portion of B and C.
 - (ii) Why is potato A necessary for this experiment?
 - (iii) Explain why water does not gather in the hollowed out portions of A and D.
13. Inner membrane of mitochondria is deeply folded. Why is it so?
14. Which organelle is the most prominent and important structure in a cell, and also acts as the control centre of the cell and why?
15. We eat food composed of all the nutrients like carbohydrates, proteins, fats, vitamins, minerals and water. After digestion, these are absorbed in the form of glucose, amino acids, fatty acids, glycerol etc. What mechanisms are involved in absorption of digested food and water?
16. If you are provided with some vegetables to cook, you generally add salt into vegetables during cooking process. After adding salt, vegetables release water. What mechanism is responsible for this?
17. How does an Amoeba obtain its food?
31. Name the stain used to prepare slides like that of onion peel and cheek cell. Why is the use of stain necessary? Do all organelles absorb stain equally?
18. Draw a plant cell and label the parts which
 - (a) Determines the function and development of the cell.
 - (b) Packages materials coming from the endoplasmic reticulum.
 - (c) Provides resistance to microbes to withstand hypotonic external media without bursting.

(d) Is the site for many biochemical reactions necessary to sustain life.

(e) Is a fluid contained inside the nucleus.

19. Bacteria do not have chloroplast but some bacteria are photoautotrophic in nature and perform photosynthesis. Which part of bacterial cell perform this?

20.



(a)



(b)

(i) Identify cell (a) and (b)

(ii) What will happen if cell (a) is kept in hypotonic solution?

(iii) What will happen if cell (b) is kept in hypertonic solution?
