



# BIOLOGY

**BOOKS - NAND LAL PUBLICATION**

**THE FUNDAMENTAL UNIT OF LIFE**

**Intext Questions**

**1. Who discovered cell and how ?**



**Watch Video Solution**

2. Why is the cell called the structural and functional unit of life?



**Watch Video Solution**

3. How do substances like  $CO_2$  and water move in and out of the cell? Discuss.



**Watch Video Solution**

4. Why is plasma membrane called a selectively permeable membrane?



**Watch Video Solution**

5. Fill in the gaps in the following table illustrating differences between prokaryotic and eukaryotic cells.



**View Text Solution**

6. Can you name the two organelles we have studied that contain their own genetic material?



[Watch Video Solution](#)

7. If the organization of a cell is destroyed due to some physical or chemical influence, what will happen?



[Watch Video Solution](#)

8. Why are lysosomes known as suicide bags?



[Watch Video Solution](#)

9. Where are proteins synthesized inside the cell.



[Watch Video Solution](#)

**Exercise**

1. Make a comparison and write down ways in which plant cells are different from animal cells.



[Watch Video Solution](#)

2. How is a prokaryotic cell different from an eukaryotic cell ?



[Watch Video Solution](#)

3. What would happen if the plasma membrane ruptures or breaks down ?



**Watch Video Solution**

4. What would happen to the life of a cell if there was no Golgi apparatus ?



**Watch Video Solution**

5. Which organelle is known as the powerhouse of the cell ? Why ?



**Watch Video Solution**

6. Where do the lipids and proteins constituting the cell membrane get synthesized ?



**Watch Video Solution**



**7. How does an Amoeba obtain its food ?**



**Watch Video Solution**

**8. What is osmosis?**



**Watch Video Solution**

**9. Carry out the following osmosis experiment:**

Take four peeled potato halves and scoos 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.(a) Now, 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:Explain why water gathers in the hollowed portion of B and C.



**Watch Video Solution**

**10.** Carry out the following osmosis experiment: Take four peeled potato halves and scoops 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.(a) Now, 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:  
Why is potatoA necessary for this experiment?



**11.** Carry out the following osmosis experiment: Take four peeled potato halves and scoos 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.(a) Now, 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:

Explain why water does not gather in the hollowed out portion of A and D.



[Watch Video Solution](#)

## Additional Questions

1. Who coined the word 'cell' ?



[Watch Video Solution](#)

2. Which instrument helps you to look at the cellular structure of an onion peel?



**Watch Video Solution**

3. Draw a labelled diagram of a compound microscope.



**View Text Solution**

4. Draw the diagram of an onion peel as shown by the compound microscope.



[Watch Video Solution](#)

5. Will there be a difference in the temporary slides of the peels of a big and a small onion as seen under the microscope?



[View Text Solution](#)

6. What is plasma membrane?



[Watch Video Solution](#)

7. What is the main feature of the plasma membrane?



[Watch Video Solution](#)

8. What is osmosis?



[Watch Video Solution](#)



9. What will happen if you place a plant or an animal cell in sugar or salt solution?



[Watch Video Solution](#)

10. What would happen if the plasma membrane ruptures or breaks down?



[Watch Video Solution](#)

**11.** Why is plasma membrane called a selectively permeable membrane?



**Watch Video Solution**