

## **BIOLOGY**

# BOOKS - CAMBRIDGE BIOLOGY (KANNADA ENGLISH)

### THE FUNDAMENTAL UNIT OF LIFE

**Question Hour** 

1. Who dicovered cells and how?



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**2.** Name the structural and functional unit of an organism.



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



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



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

Prokaryotic Cell	Eukaryotic Cell		
1. Size: Generally small(1- 10 μm) 1 μm = 10-6	1. Size: Generally large (5- 100 μm)		
m².  2. Nuclear region : and is known as  3. Chromosome : single  4. Membrane – bound cell organelles are absent	Nuclear region: Well – defined and surrounded by a nuclear membrane.     More than one chromosome		



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



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



8. Why are lysosomes known as suicide bags?



9. Where are proteins synthesized inside the cell?



# Exercise

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



**2.** How is a prokaryotic cell different form a eukaryotic cell ?



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



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



**5.** Why are mitochondria called " power houses of the cell"?



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6. Where do the lipids and proteins constituting the						
cell membrane get synthesized ?						
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7. How does an Amoeba obtain its food ?						
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8. What is osmosis?						
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- **9.** Carry out the following osmosis experi ment. Take four peeled potato to 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 tray containing water . Now
- (a) Keep cup A empty
- (b) Put one teaspoon sugar in cup B
- (c) Put one teaspoon sugar in the boiled potato cup

  D. Keep these for two hours . The observe the four

  potato cups and answer the following : M
- (i) Explain why water gathers in the hollowed portion of B and C.

(ii) Why is potato A necessary for the experiment .

(iii) Explain why water does not gather in the hollowed out portions of A and D.



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## **Additional Questions Choose The Correct Answer**

1. Mitochondria are found

A. In all type of living cells

B. only in animal cells

C. Only a plant cells

D. In eukaryote cells only

#### **Answer: D**



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**2.** Who discovered the first living cell.

A. Robert Hooke

B. Leeuwenhock

C. Durkinje

D. Robert Brown

Answer: B

3. Which of the following can be made into crystal.

A. A bacterium

B. An Ameoba

C. A Virus

D. A Sperm

**Answer: C** 



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<b>4.</b> The main constituent of cell wall is
A. Starch
B. Cellulose
C. Protein
D. None of these
Answer: B
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<b>5.</b> Which organelle is the power house of the cell.

A. Plastide				
B. Mitochondria				
C. Golgi				
D. Calcium				
Answer: B				
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<b>6.</b> Chromosomes are made up of nucleic acid and				
A. Phosphorus				

7. Which organelle is considered as a suicide bage of

the cell.

A. Centrosome

B. mesasome

- C. Lysosomes
- D. Chromosome

#### **Answer: C**



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- **8.** Plastids which are responsible for giving colours to fruits and flowers are
  - A. Chloroplasts
  - B. Leucoplasts
  - C. Protoplasts

D. Chromoplasts.

#### **Answer: D**



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**9.** Which of the following organelle is present in onion cells but not in human cheek cells.

A. Cell wall

B. Cytoplasm

C. Nucleus

D. Plasma membrane

#### **Answer: A**



- **10.** Which cell organelle plays a crucial role in deoxifiying many poisons and drugs .
  - A. Golgi apparatus
  - B. Lysosomes
  - C. Smooth endoplasmic reticulum
  - D. Vacuoles

**Answer: C** 



# Additional Questions Fill In The Blanks

1. The largest cell in the human body is \_\_\_



2. The cell theory was proposed by \_\_\_\_



3. A plant cell differ from an animal cell in the							
absence of							
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<b>4.</b> Centrosome is found in							
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<b>5.</b> Ribosomes are the centre for							
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# **Additional Questions Answer The Following**

1. What are cell organelles?



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2. What is plasma membrane? What are their founctions?



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**3.** Define osmosis. In what ways it is different from diffusion?



**4.** Write one function of each - Ribosomes, vacuole, lysosomes, plastids.



**5.** Name the two nucleic acid present in the cell and their functions.



6. What are the advantage of multicellu - larity?

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7. What is cellulose and its functions.



**8.** Name a cell that lacks membrane. Where is it propared.



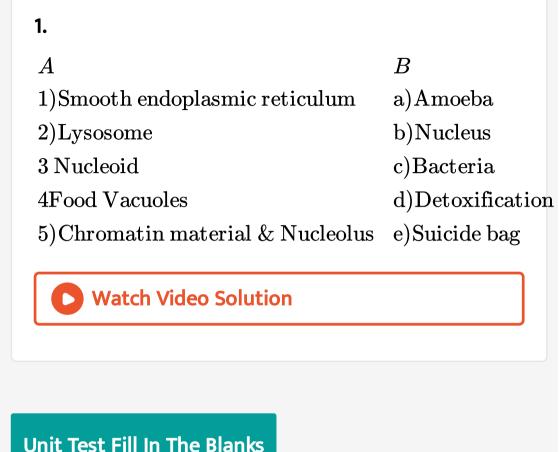
**9.** What are the factors which restrict the size of the cell ?



10. Write down the main functions of cell wall.



Additional Questions Match The Following



**1.** Who discovered the first living cell\_\_\_\_\_



**2.** Centrosome is found in



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# **Unit Test Answer The Following**

**1.** Write the difference between plant cell and animal cell?



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**2.** Why are mitochondria called " power houses of the cell"?



**3.** Write one function of each - Ribo somes, vacuole, lysosomes, plastids.



4. Write down the main functions of cell wall.

