# NTSE

NCERT Solutions for Class 9 Science Biology – The Fundamental Unit of Life



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# NCERT ANNEXURE

Below you can go through the subjective type questions and solutions from NCERT Annexure.

# 1. What is the structural and functional unit of life and why it is so-called?

#### Ans. Cell is called the structural and functional unit of life.

<u>Structural Unit</u>: A living organism is made up of one or more cells. Cells form tissue, tissues form organs, organs form organ systems & organ systems form an organism. So, the cell is the structural unit of life.

**Functional Unit**: All life functions of an organism reside in its cells. Cells may also become specialized to perform specific functions like contraction of muscles or transmission of impulses. Therefore, cells are called a functional unit of life.

# 2. What will happen if there will be no Golgi apparatus in the cell?

- Ans. (1) If there will be no Golgi apparatus in the cell there will be no secretory functions.
  - (2) Golgi apparatus do packaging and dispatching of materials, so it will not be there inside the cell in their absence
  - (3) There will be <u>no synthesis</u> of cell wall, plasma membrane and lysosomes.
  - (4) There will be <u>no intracellular digestion</u> and cleansing.

#### 3. How does an Amoeba obtain its food with the help of a diagram?

Ans. 1) Amoeba is a unicellular organism. It obtains (eats) its food with the help of pseudopodia.

- 2) It encloses food to form food vacuole by <u>Phagocytosis</u> (ingestion).
- 3) The <u>food vacuole</u> has certain enzymes which digest the food (digestion).
- 4) The digested nutrients diffuse into the cytoplasm (absorption) and used up (assimilation).
- 5) The <u>undigested food</u> is thrown out from its body by exocytosis (egestion).



1 Ingestion 2 Digestion 3 Absorption 4 Assimilation 5 Egestion







# 4. Why can't you say that plant cell and animal cell are alike?

#### Ans. We can't say that plant cells and animal cells are alike because of the following differences.

PLANT CELL	ANIMAL CELL		
(1) Plant cells are larger than animal cells.	(1) Animal cells are generally small in size.		
(2) Cell wall is present.	(2) Cell wall is absent,		
(3) Plastids are present.	(3) Except Euglena no animal cell possesses plastids.		
(4) Plant cells have many simpler units of apparatus called	(4) Animal cells have a single highly complex and		
dictyosomes.	prominent Golgi apparatus.		
(5) Plant cells lack centrosome and centriole. It has a polar	Animal cells have centrosomes and centrioles.		
body.			

#### 5. Where do lipids and proteins constituting cell membrane get synthesized?

**Ans.** Lipids are synthesized by Smooth Endoplasmic reticulum and proteins constituting cell membrane are synthesized in Rough Endoplasmic reticulum. This process is called "Membrane biogenesis".

#### NCERT EXEMPLAR

Here are the Objective Type questions and solutions from NCERT Exemplar.

#### 1. Which of the following can be made into crystal?

	(A) A Bacterium	(B) An Amoeba	(C) A Virus	(D) A Sperm	
Ans.	(C)	-(3)-			
2.	A cell will swell up if				
	(A) The concentration of water molecules in the cell is higher than the concentration of water molecules in surrounding				
	medium				
	(B) The concentration of water molecules in surrounding medium is higher than water molecules concentration in the cell				
	(C) The concentration of water molecules is same in the cell and in the surrounding medium				
	(D) Concentration of water molecules does not matter				
Ans.	(B)				
3.	Chromosomes are made up of				
	(A) DNA	(B) Protein (C)	DNA and protein	(D) RNA	
Ans.	(C)				

4. (b)
4. Which of these options are not a function of Ribosomes?
(i) It helps in the manufacture of protein molecules.
(ii) It helps in the manufacture of enzymes.

- (iii) It helps in the manufacture of hormones.
- (iv) It helps in manufacture of starch molecules.

(A) (i) and (ii) (B) (ii) and (iii) (C) (iii) and (iv)

Ans. (C)



(D) (iv) and (i)





#### 5. Which of these is not related to endoplasmic reticulum?

- (A) It behaves as a transport channel for proteins between nucleus and cytoplasm.
- (B) It transports materials between various regions in cytoplasm.
- (C) It can be the site of energy generation.
- (D) It can be the site for some biochemical activities of the cell.
- Ans. (C)

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