

UPDAAN

2025

LIFE PROCESSES

Biology

Lecture - 01

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Ma'am



Topics to be covered

- 1 Introduction to Life Processes
- 2 Types of Nutrition
- 3 Autotrophic and Heterotrophic Nutrition
- 4 MCQ Practice and Homework





WELCOME TO THE TEAM!



CLASS X - SCIENCE

100 marks

Questions

- PHYSICS - 25
- CHEMISTRY - 25
- BIOLOGY - 30

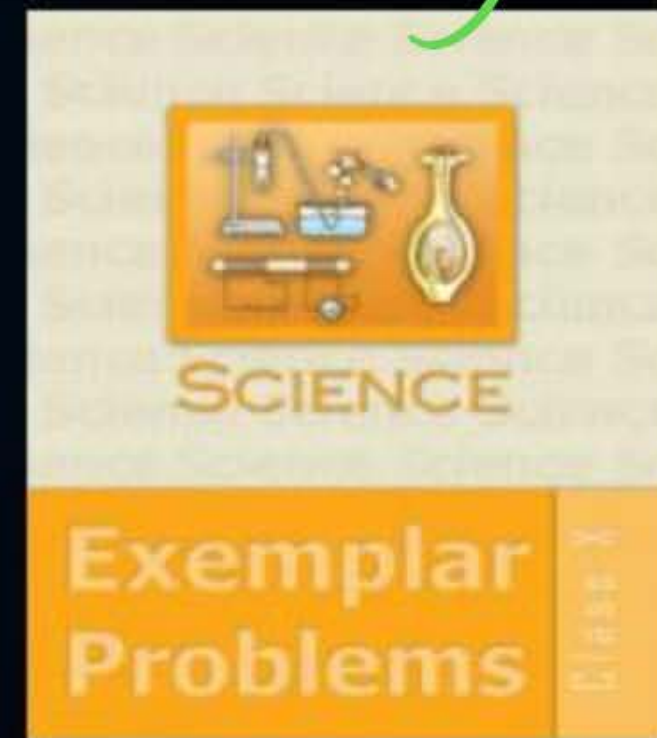
Theory Total - 80

Internal assessment - 20

GRAND TOTAL - 100 MARKS

- ① Theory
 - ② Activities
 - ③ Questions
- + ① Intext
- + ② Exercise

BOOKS



<https://ncert.nic.in/textbook.php>



Class X - BIOLOGY



→ 30 marks

- Life Processes
- Control and Coordination
- How do Organisms Reproduce ?
- Heredity and Evolution
- Our Environment
- Sustainable Management of Natural Resources***

→ 25 marks

→ 5 marks

Flow of Studies

✓ 1. Attend regular lectures

→ No backlog

✓ 2. Read that topic in NCERT

✓ 3. Make your handwritten notes

✓ 4. Practice questions (DHA, NCERT & NCERT Exemplar)

✓ 5. Don't skip tests

→ Daily home assignment

पढ़ाई
कैसे करें
?



#Ch

Clear hai!

SAMSQUAD KO BIOLOGY KESI LAGTI HAI ?



A



B

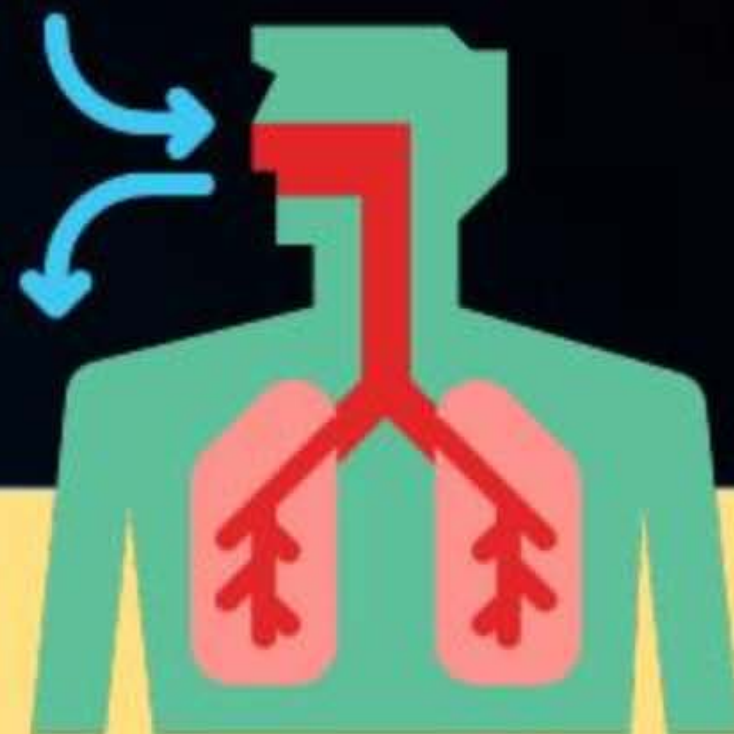
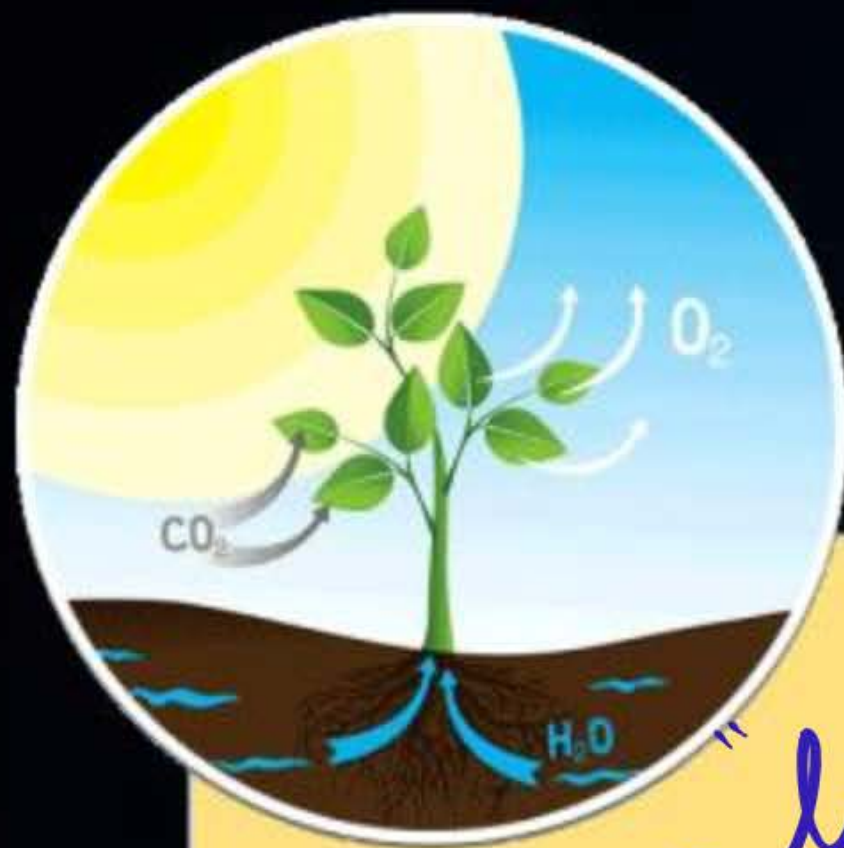


C



D





living **Class - X**
BIOLOGY *Praksiya*
LIFE PROCESSES

What is Meant by Living ?



Characters of Living Organisms



Mrs.
GREEN



M
R
S
G
R
E
N

Molecular
Movement ✓

Respiration ✓

Sensitivity

Growth ✓

Reproduction ✓

Excretion ✓

Nutrition ✓

Environment

Sense → Respond.

Control & Coordination

WHAT ARE LIFE PROCESSES ?



#Ch

Life Processes



The basic and essential activities performed by a living organism to sustain and maintain life.

Support

Nutrition

Process of obtaining and utilisation of Food

Respiration

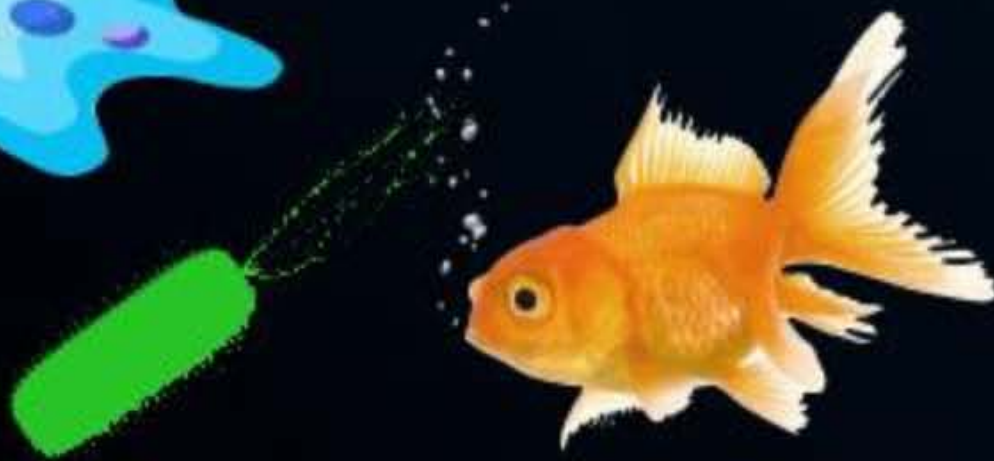
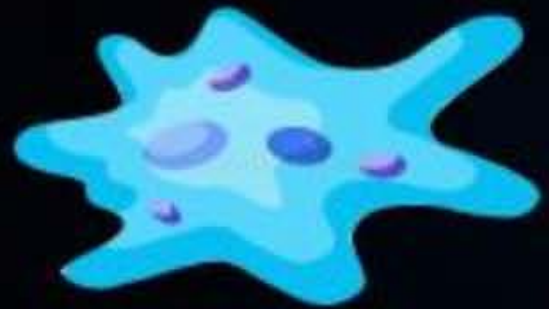
Process of Breaking down the food to produces energy

Transportation

Process of transporting useful and non useful substances from part to another part of the organism

Excretion

Process of removal of metabolic waste





"Poop"

Excretion

≠ Egestion
⇒ ⑤

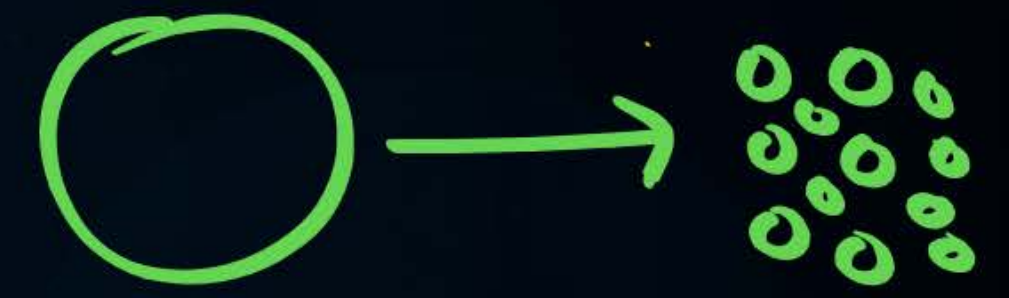
Removal of
undigested &
unabsorbed
food.

Metabolism/Metabolic Reactions

Sum of all the total
Chemical reactions taking
place in a cell/living organism

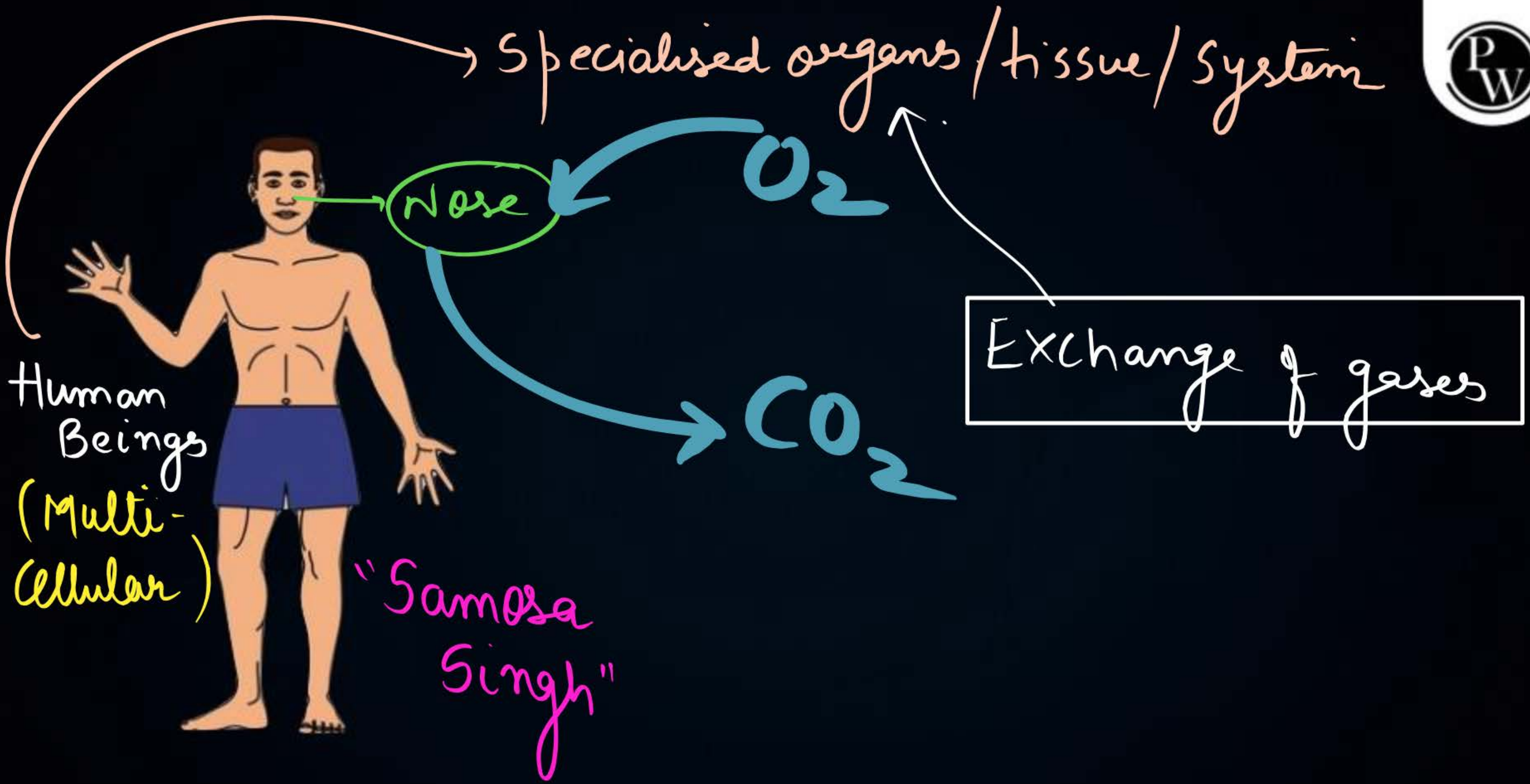
Waste product in our cells
↓
blood

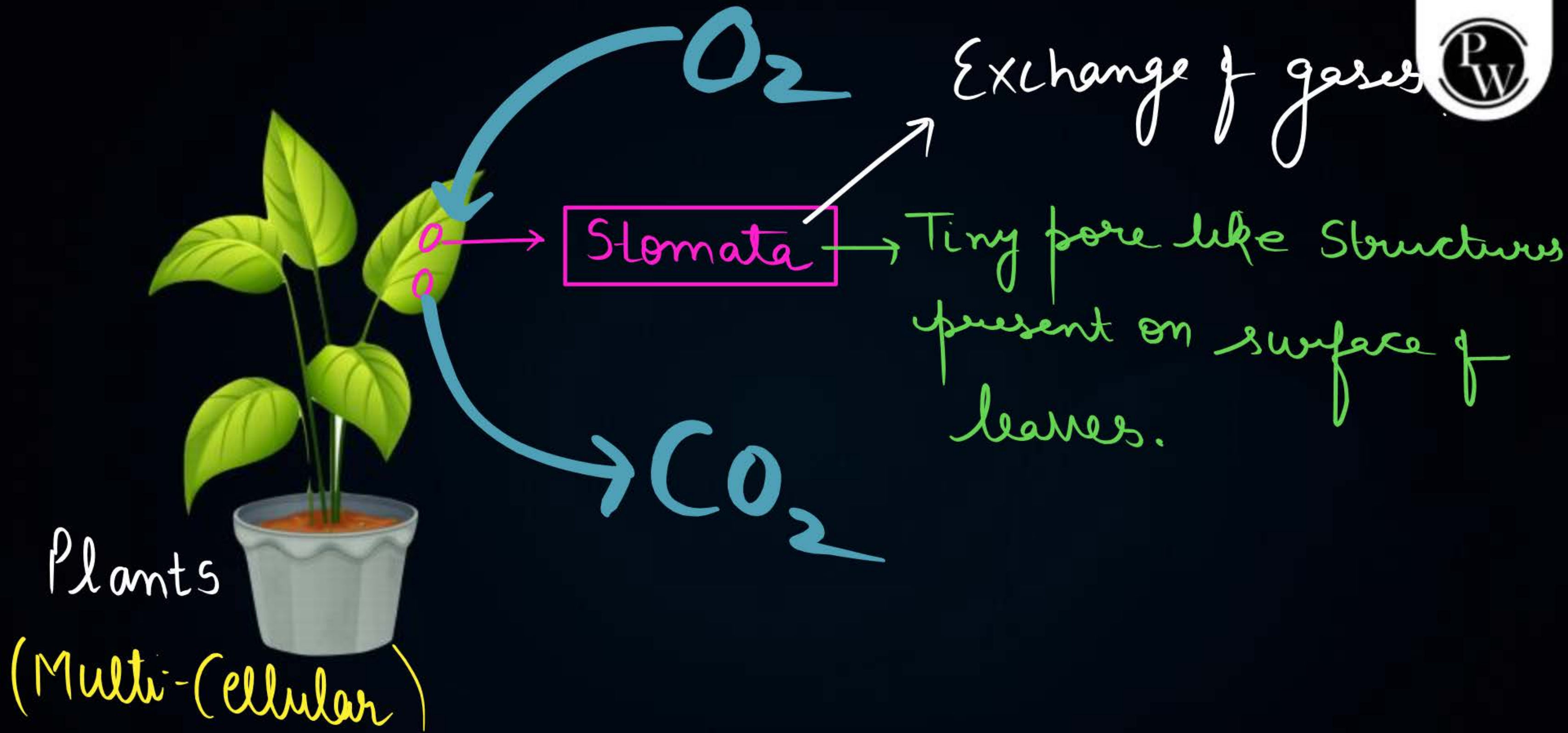
① Catabolism

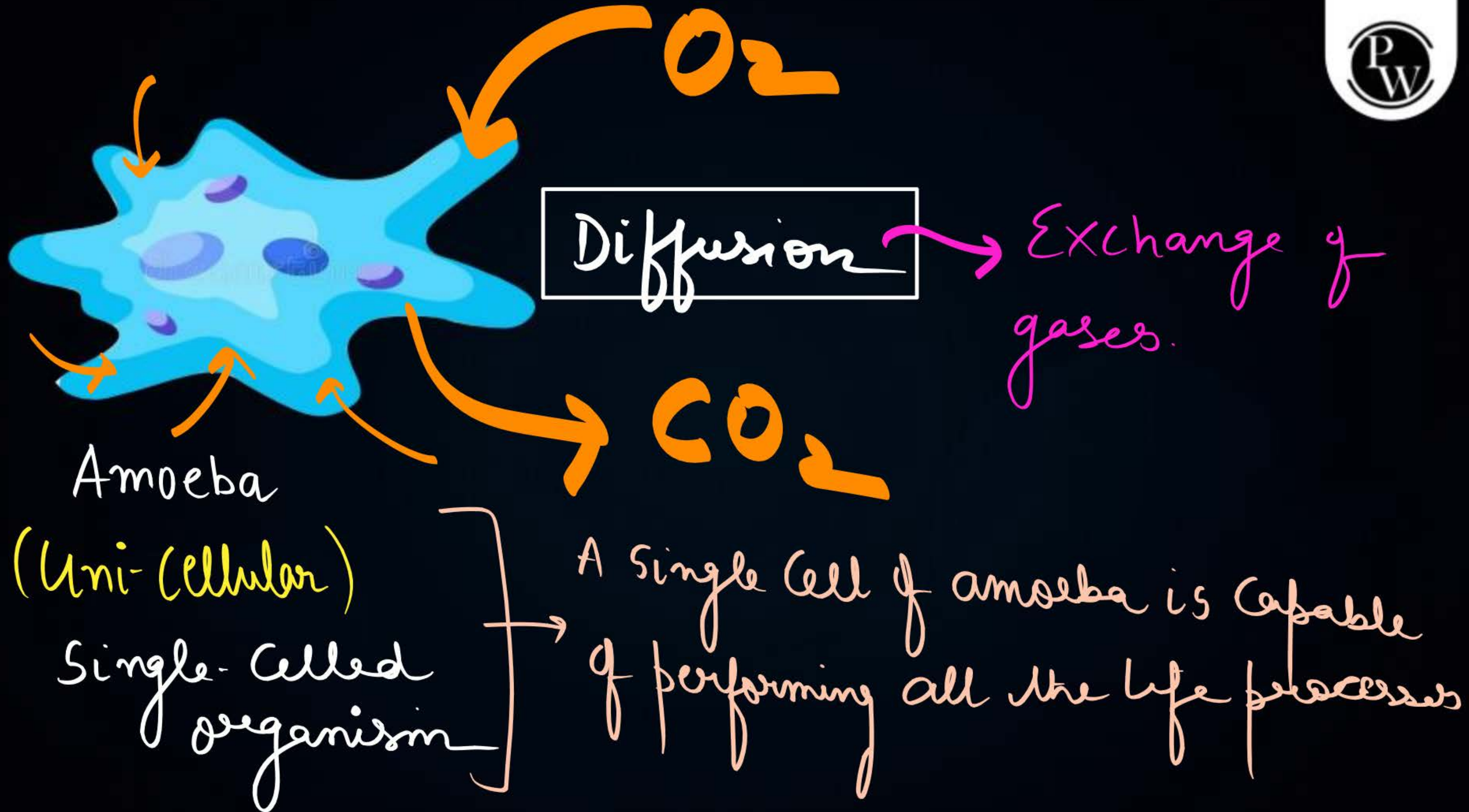


② Anabolism









QUESTION

H.Q.

Halwa Q's.



Which of the following is a life process ?

A Respiration ✓

B Nutrition ✓

C Excretion ✓

☒ D All of these

QUESTION



Single Cell.

In amoeba, exchange of gases occur via-

A Specialised tissues ^X

Nose / lungs.

B Osmosis

movement of water

☒ C Diffusion


gases.

D Stomata ^X



Nutrition

Process by which a living organism obtain & utilize its food.

- 
- ① Energy
 - ② Growth and development
 - ③ Repair old tissues
 - ④ New cell & tissue formation

Nutrients

→ Components of food.

- ① Carbohydrates
- ② Proteins
- ③ Vitamins & Minerals
- ④ Fats etc.



Self
Nourishment

Types of Nutrition

Autotrophic Nutrition

- In autotrophic nutrition organisms prepare their own food

Autotrophes → green plants
→ Cyanobacteria

Heterotrophic Nutrition

dependent on other organisms

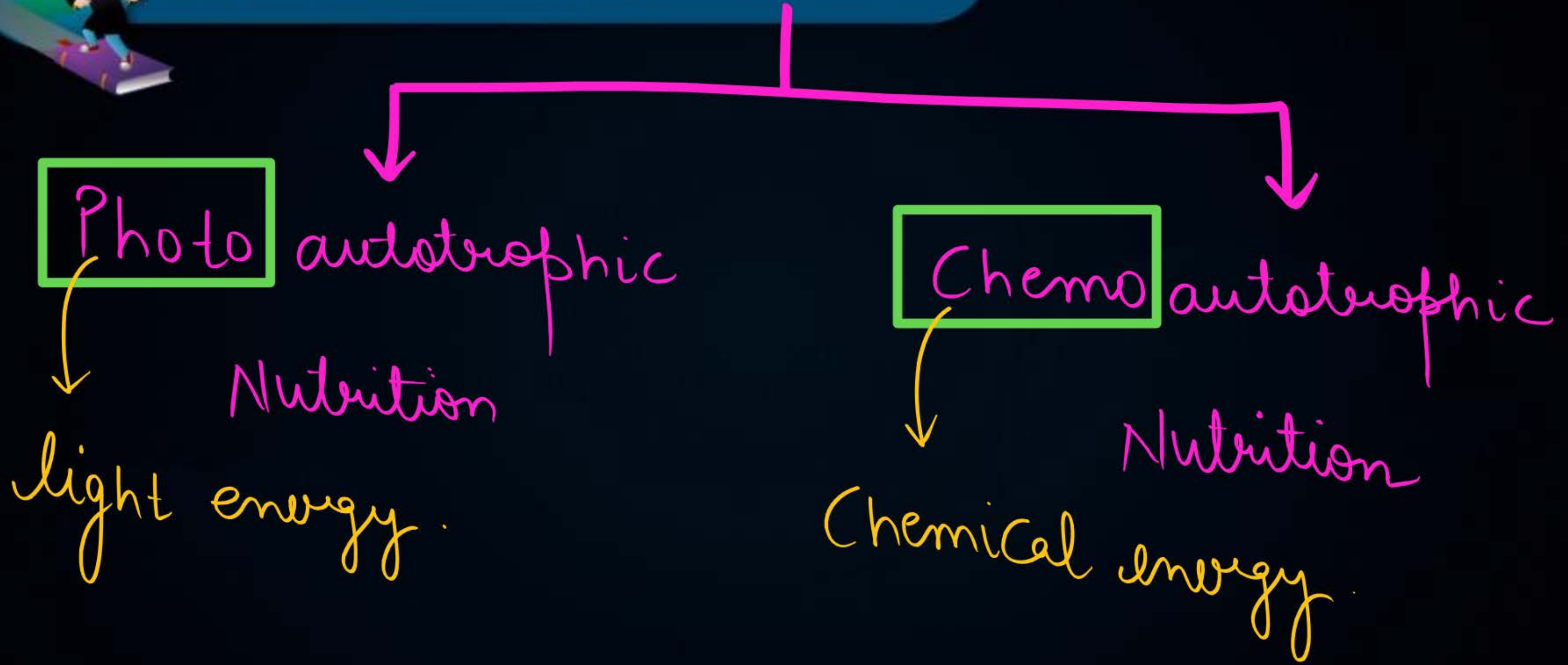
- In heterotrophic nutrition organisms do not prepare their own food

Heterotrophes

- * Animals
- * Fungi
- * Bacteria



Types of Autotrophic Nutrition



Photosynthetic - Autotrophic Nutrition

- A type of autotrophic nutrition in which organisms prepares their own food by utilizing light energy.

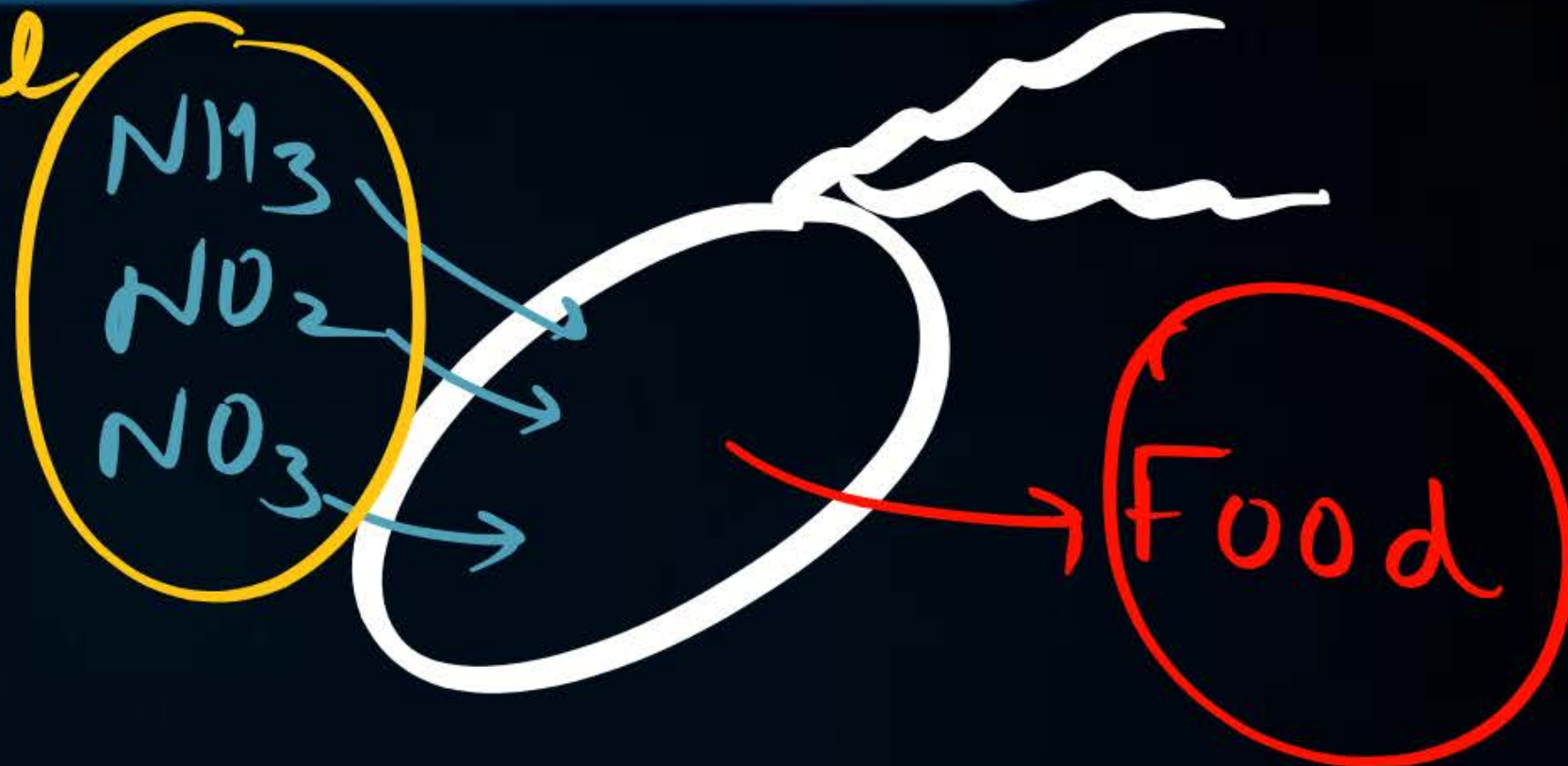


Chemosynthetic - Autotrophic Nutrition



- A type of autotrophic nutrition in which organisms prepares their own food by utilizing chemical energy.

Chemical energy



Soil

Nitrosomonas

Nitrobacter

Sulfur bacteria

QUESTION



Which of the following mode of nutrition is shown by green plants ?

- A Heterotrophic
- ☒ B Photo autotrophic
- C Chemo autotrophic
- D None of these

light

photosynthesis

QUESTION

notes



Why is diffusion insufficient to meet the oxygen requirement of multi cellular organisms like humans ?

Intext

Solution:

✓ Human beings are the multi- cellular organisms and have complex body structures. All the body cells do not contain direct contact with the environment, so they need the oxygen and oxygen requirement cannot fulfil by the diffusion process.

So, in the multi- cellular organisms like human beings they have special types of tissues and the organs which helps them to meet the oxygen requirement of the body.



Question of the Day



What type of nutrition is shown by insectivorous plants ?

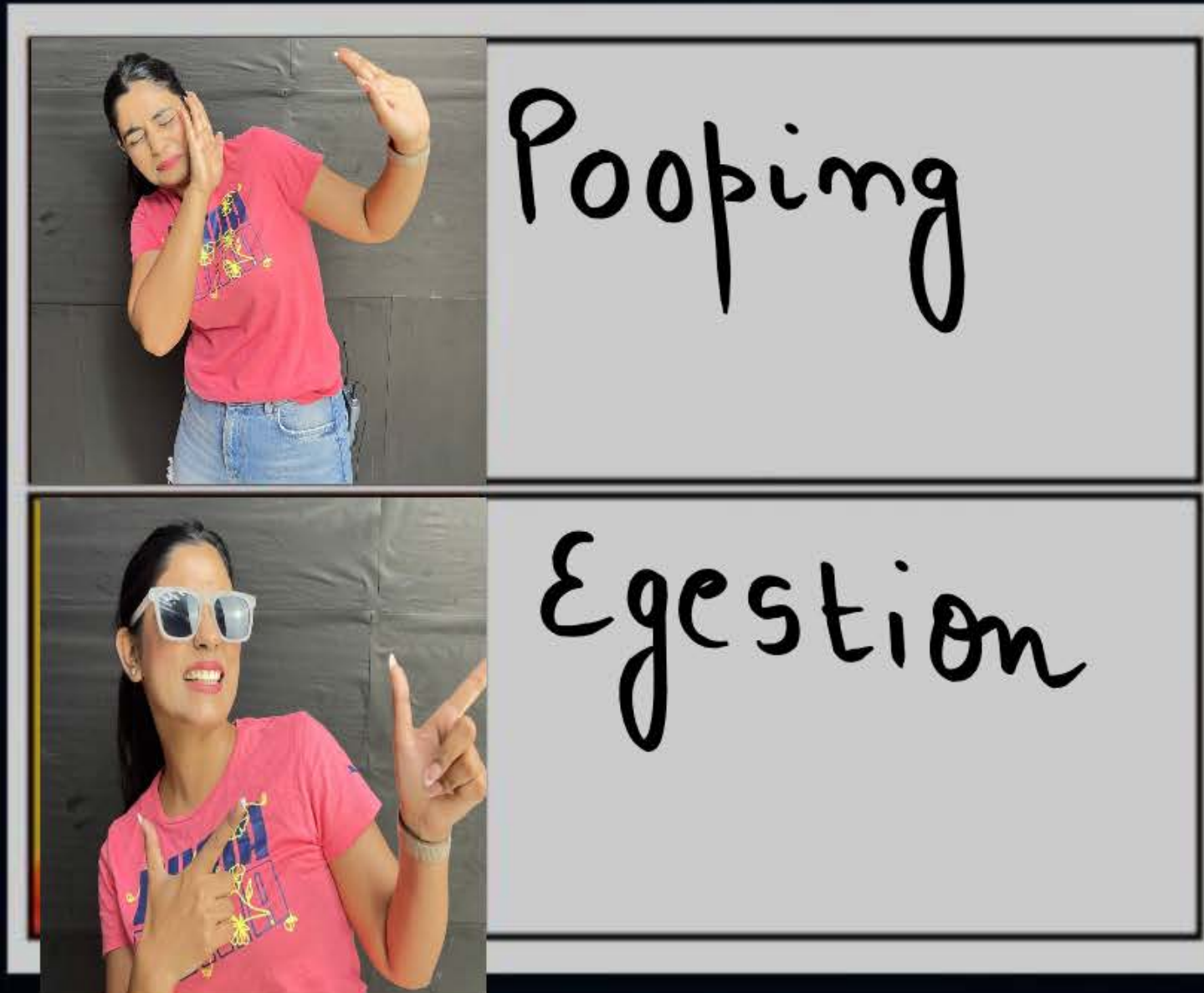




Joke/Meme of the Day



When somebody in biology class says :





THANK
YOU

