

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

বিস্মিল্লাহির রাহমানির রাহীম



# উদ্দাম

একাডেমিক এন্ড এডমিশন কেয়ার

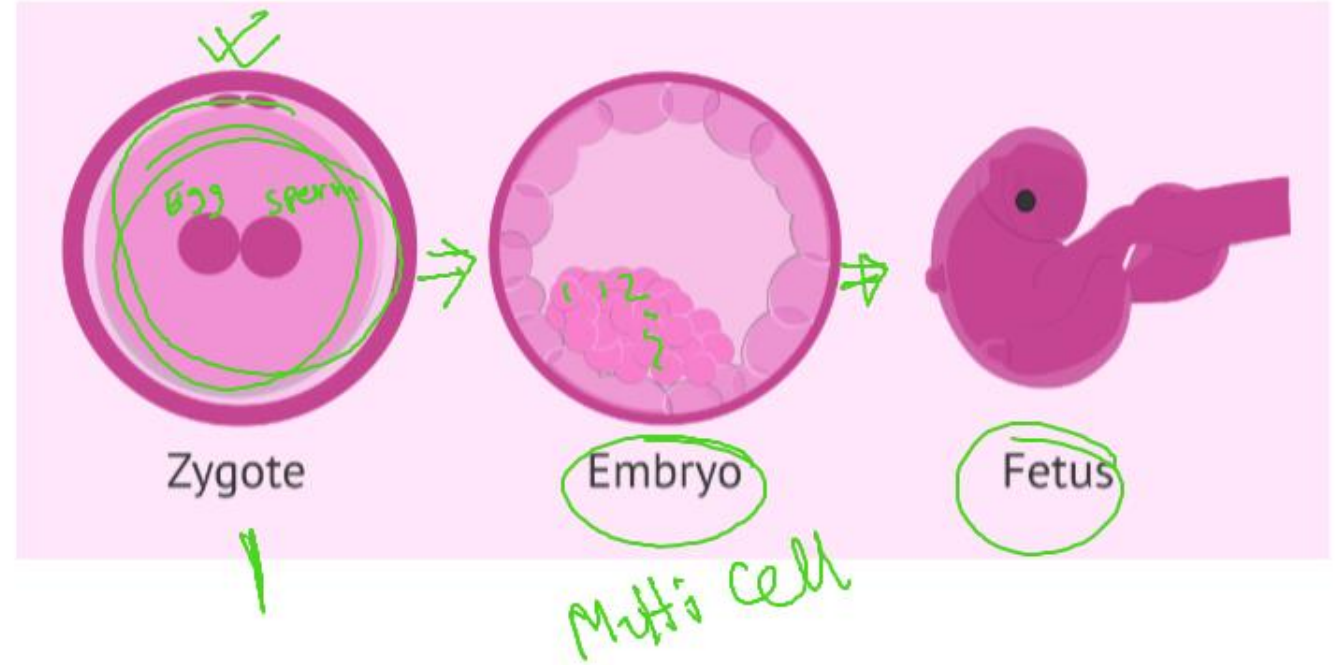
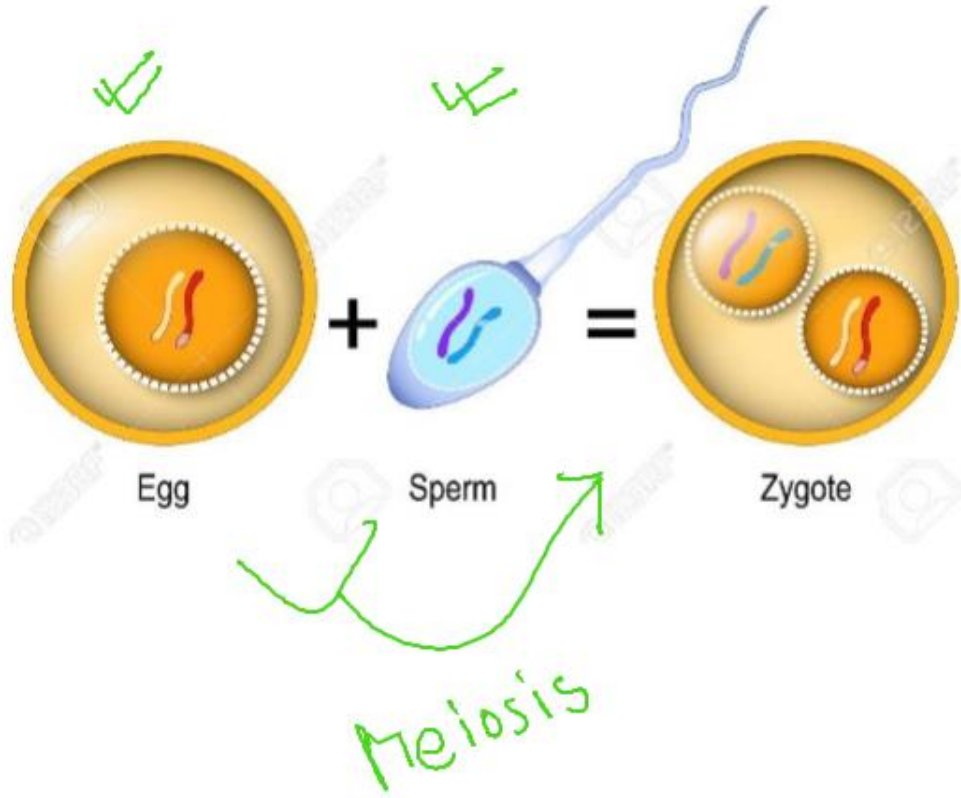
# **Class Nine: Biology, Chapter: 3 (3.3)**

## **Cell division**

**LECTURE-B 07**



# Importance of Mitosis



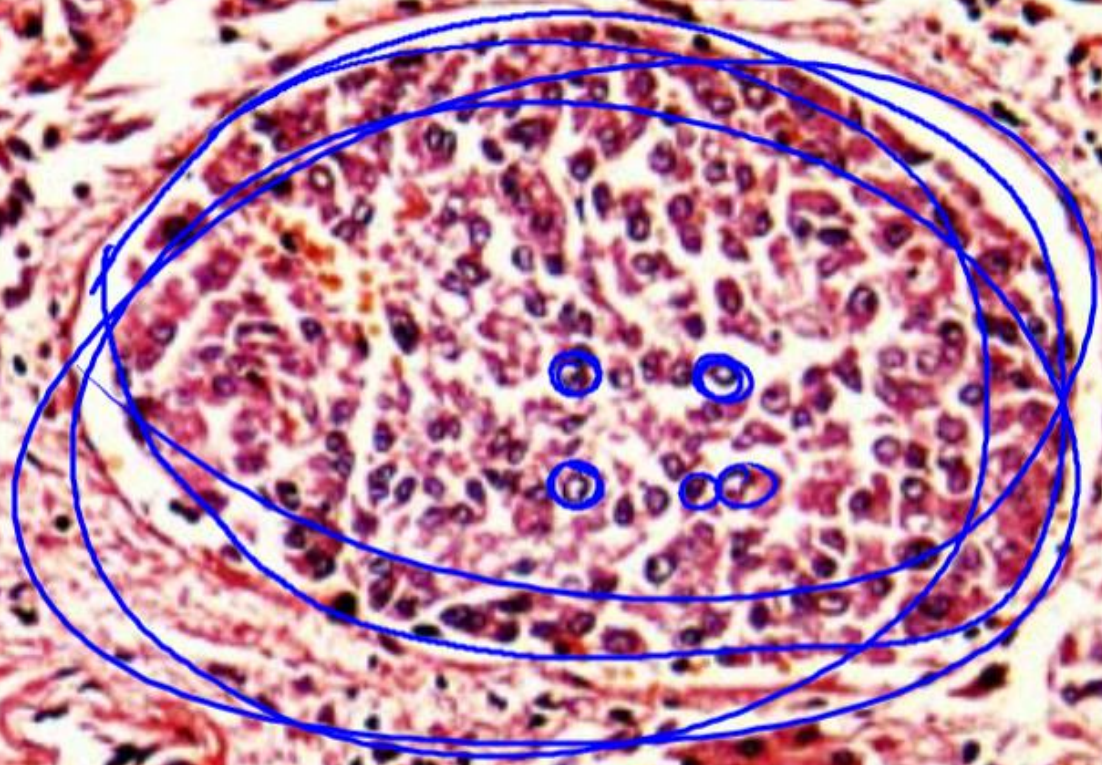
2 participants raised hand

# Importance of Mitosis





Liver



Tumors

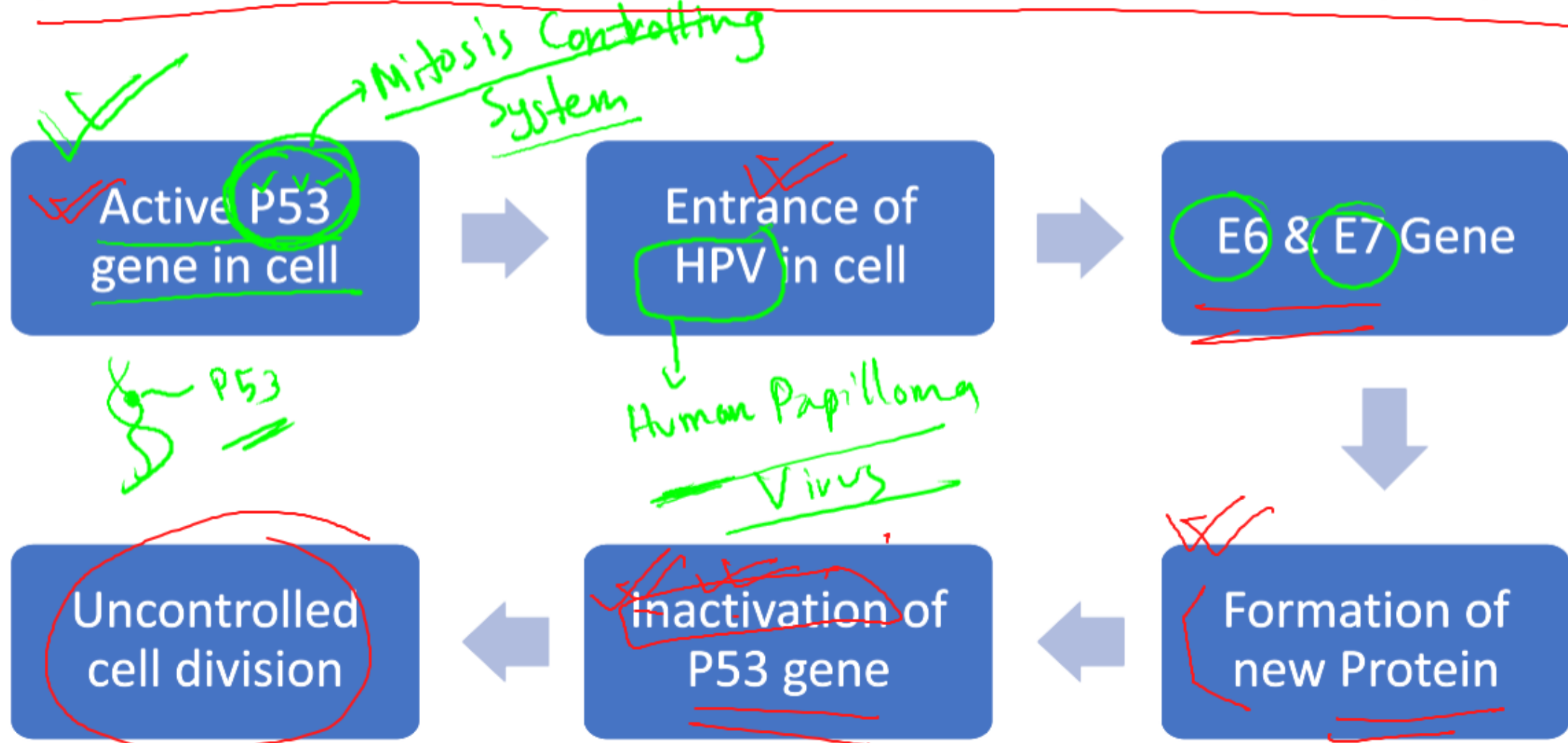


# Importance of Mitosis

Boss raised hand

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## Uncontrolled Mitosis can cause Tumor & Cancer





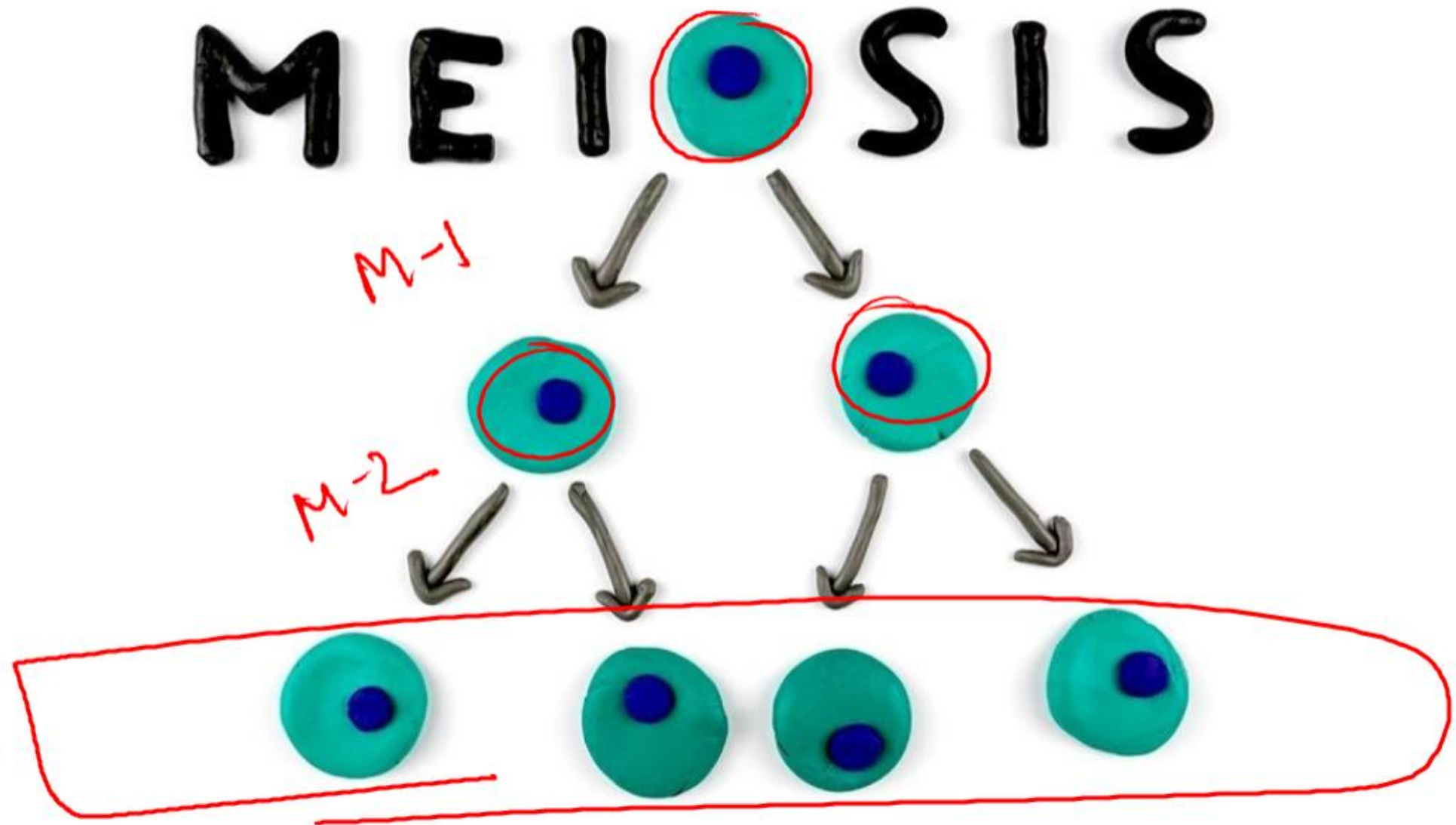
# Importance of Mitosis



Cancer can be developed in almost every part of the body such as Liver, Lungs, Brain, Skin, Colon & Uterus etc.

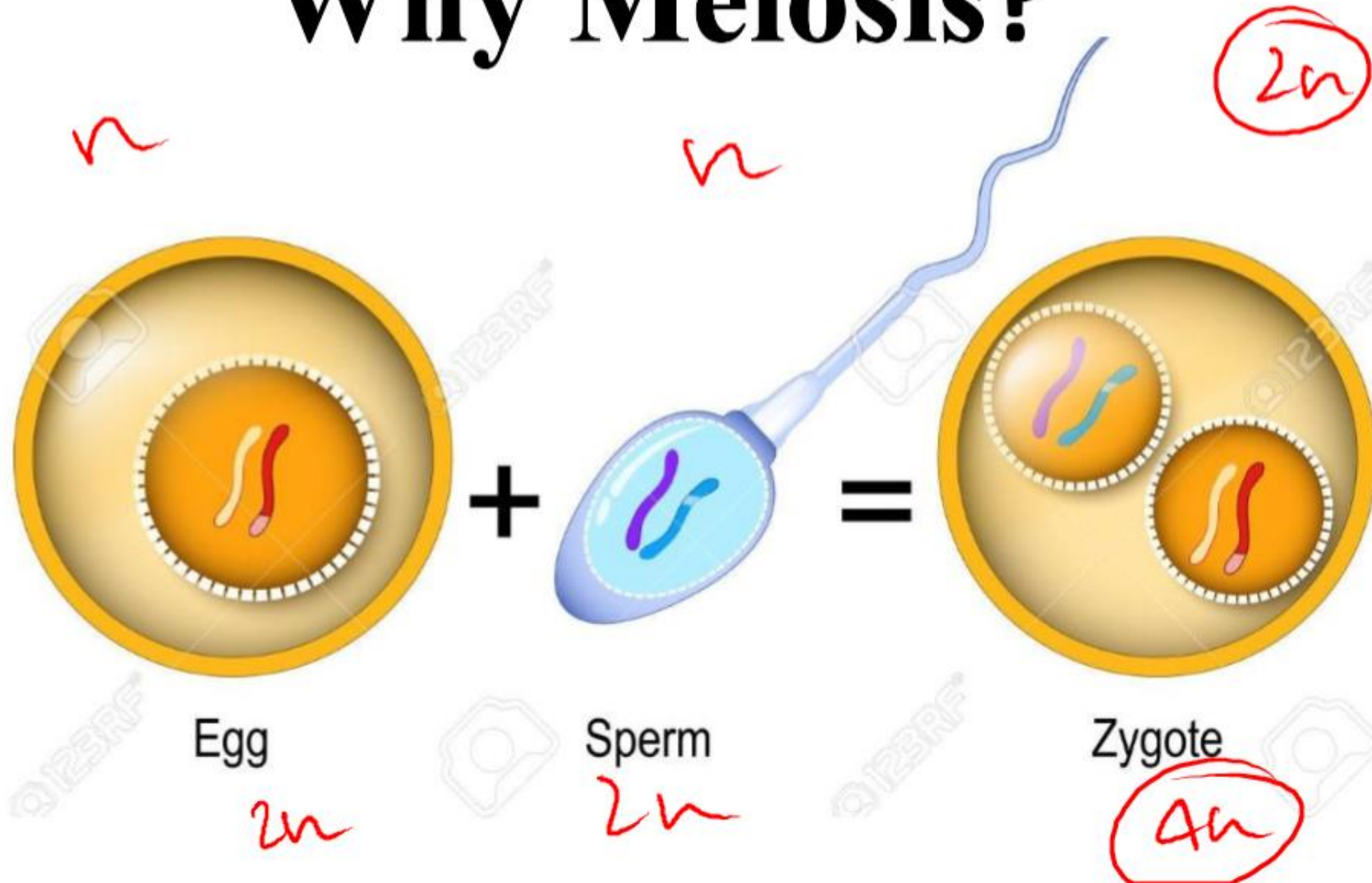


# Meiosis Cell Division



# Meiosis Cell Division

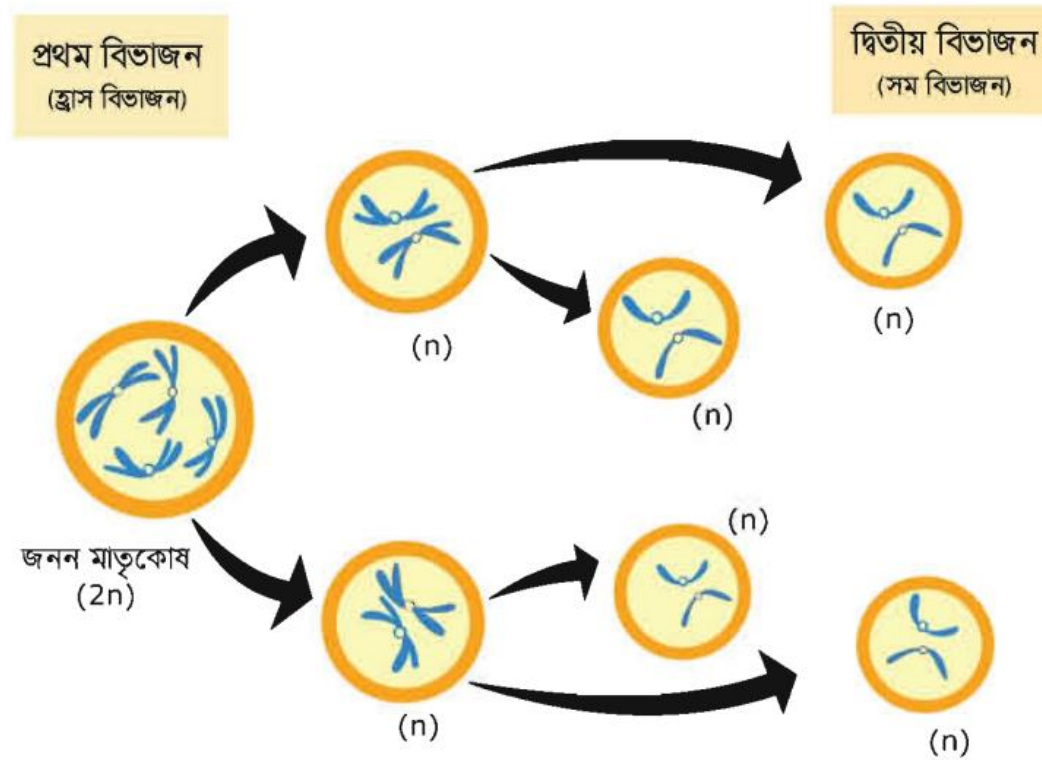
## Why Meiosis?





# Meiosis Cell Division

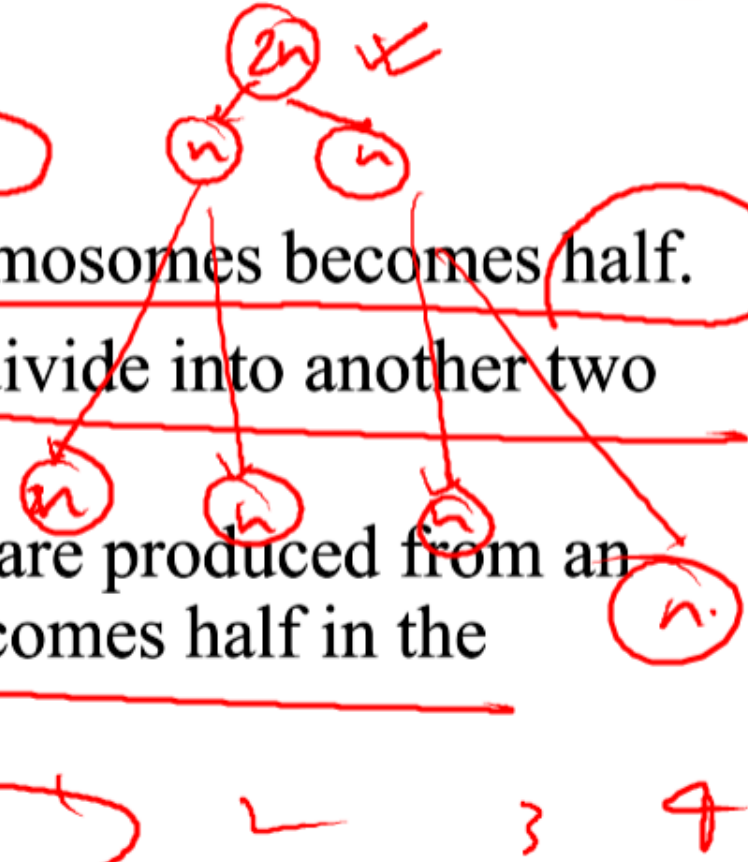
## Process of Meiosis



চিত্র 3.08: মিয়োসিস বিভাজন সম্বন্ধে ধারণা

# Meiosis is called reductional division

- ☒ In Meiosis cell division, the Nucleus divides twice.
- ☒ In the first division (Meiosis-I), the number of chromosomes becomes half.
- ☒ The two daughter cells formed in Meiosis-I, again divide into another two new cells (Meiosis-II).
- ☒ Finally in Meiosis cell division, four daughter cells are produced from an eukaryotic cell and the number of chromosomes becomes half in the daughter cells from that of mother cell.
- ☒ That's why Meiosis is called reductional division.



2 participants raised hand

# If Meiosis doesn't occur.....

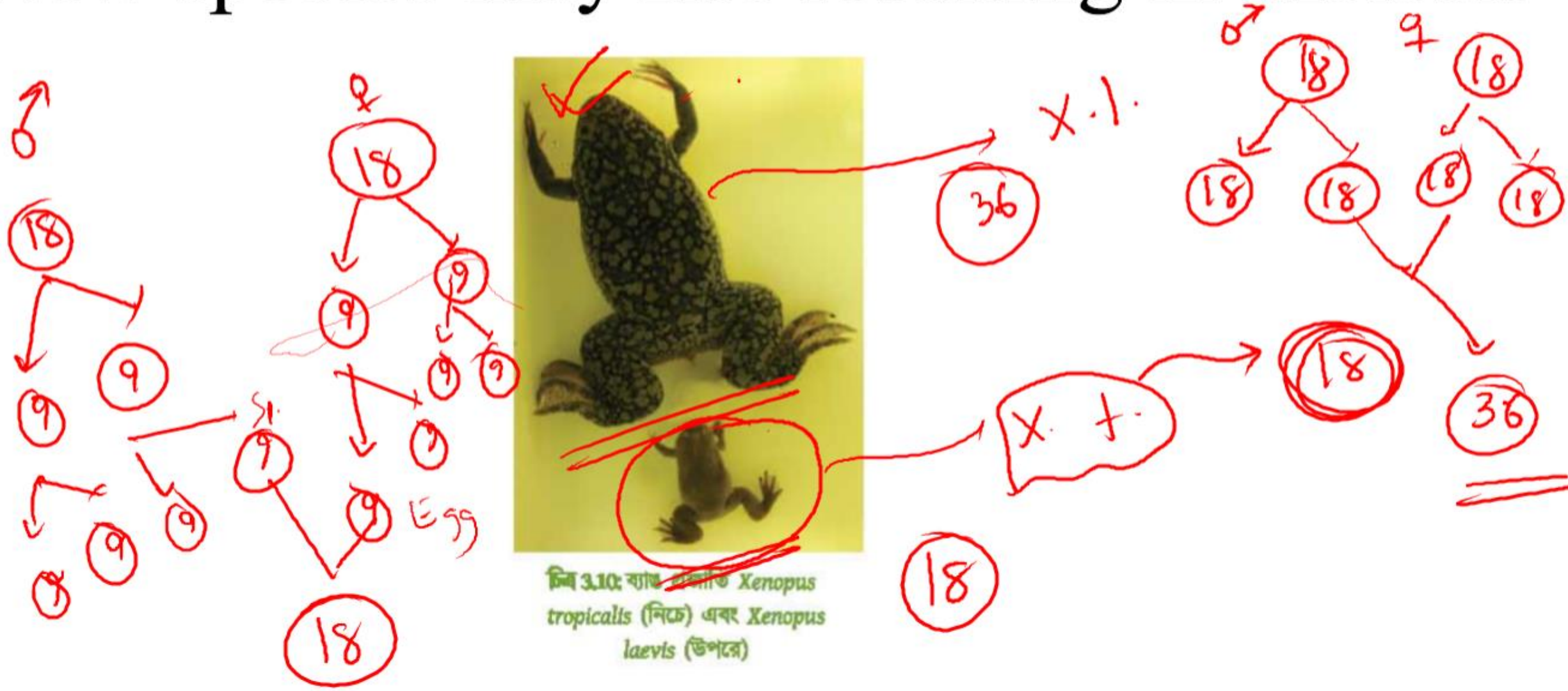


- ☒ The number of chromosomes in the cell doubles in every sexual reproduction.
- ☒ If the number of chromosomes is increased life cycle after life cycle, the offspring will be fundamentally different.
- ☒ As Meiosis occurs, the features in the species of living organisms stay the same, generation after generation.
- ☒ In reality, sometimes a new species may come into being if suddenly the number of chromosomes increases.



# Important of Meiosis

New species may rise resulting in Meiosis



# Survival in a changing environment is ensured by Meiosis..... $\rightarrow \textcircled{F} + \textcircled{D} \Rightarrow H$

$2n$   
 $\downarrow$   
 $2n$   $\textcircled{2n}$

- ☐ If all of the individuals of a species are too genetically similar & have no genetic variation, then there is less possibility of surviving a new situation.
- ☐ As a result, a single disease or change in the environment could drive the species to extinction.
- ☐ But if genetic variation exists in any species, there is the possibility of survival in a new environment.

# Poll Question 01

In which step of mitosis the chromosomes become in V,L,J,I shape?

- a) Metaphase
- b) Anaphase
- c) Prophase
- d) Telophase



# Poll Question 02

What is the consequence of uncontrolled mitosis?

- a) Ulcer
- b) Diabetics
- c) Cancer
- d) TB

# Poll Question 03

How many daughter cells are produced in meiosis?

a) 2

b) 3

c) 4

d) 6

# Poll Question 04

How many time cells divide during meiosis ?

a) 1

b) 2

c) 4

d) 5



# Poll Question 05

Which division cause the exchange of gene?

- a) Amitosis
- b) Mitosis
- c) Meiosis
- d) Binary fission

লেগে থাকো সৎভাবে,  
স্বপ্ন জয় তোমারই হবে

উদ্ভাস-উন্মেষ শিক্ষা  
পরিবার

**Thank You**