Class- 6

BIOLOGY

Assertion (A): The person with diabetes insipidus feels thirsty.

Reason (R): A person with diabetes insipidus suffers from excess secretion of vasopressin.

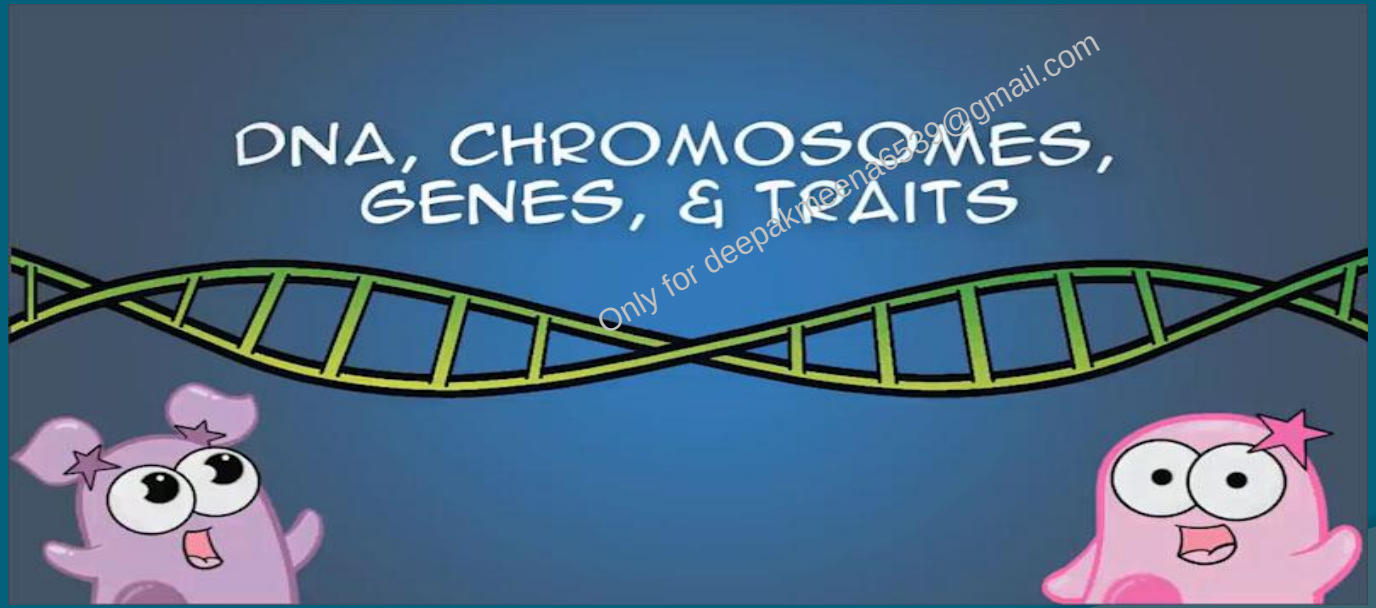
(a) Both (A) and (R) are individually true and R is the correct explanation of A

(b) Both (A) and (R) are individually true and R is not the correct explanation of A

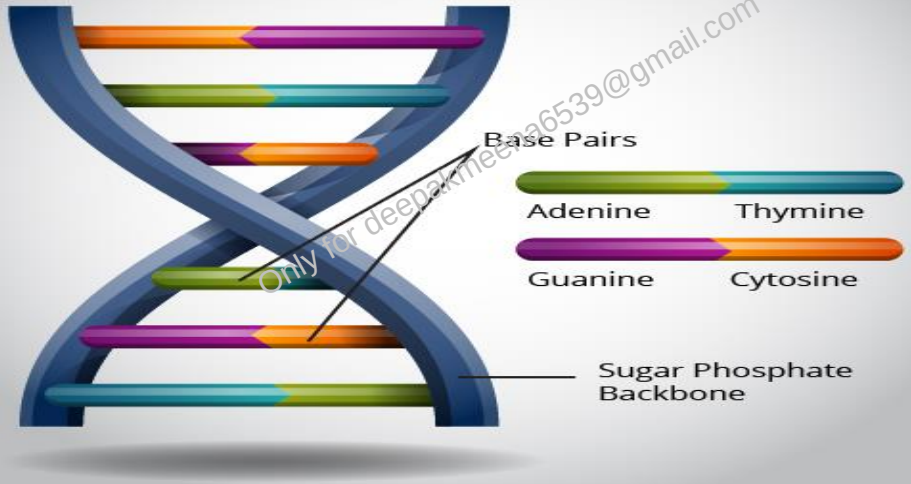
(c) A is true but R is false

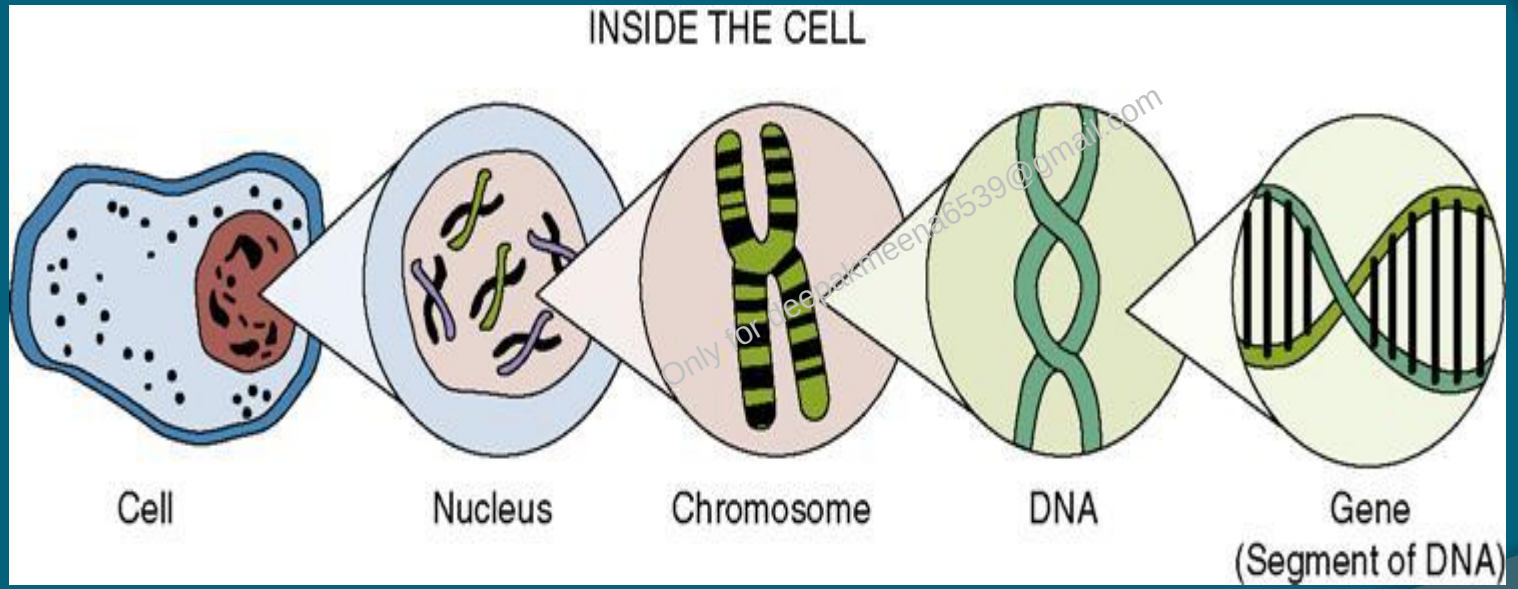
(d) A is false but R is true

Genetics and biotechnology

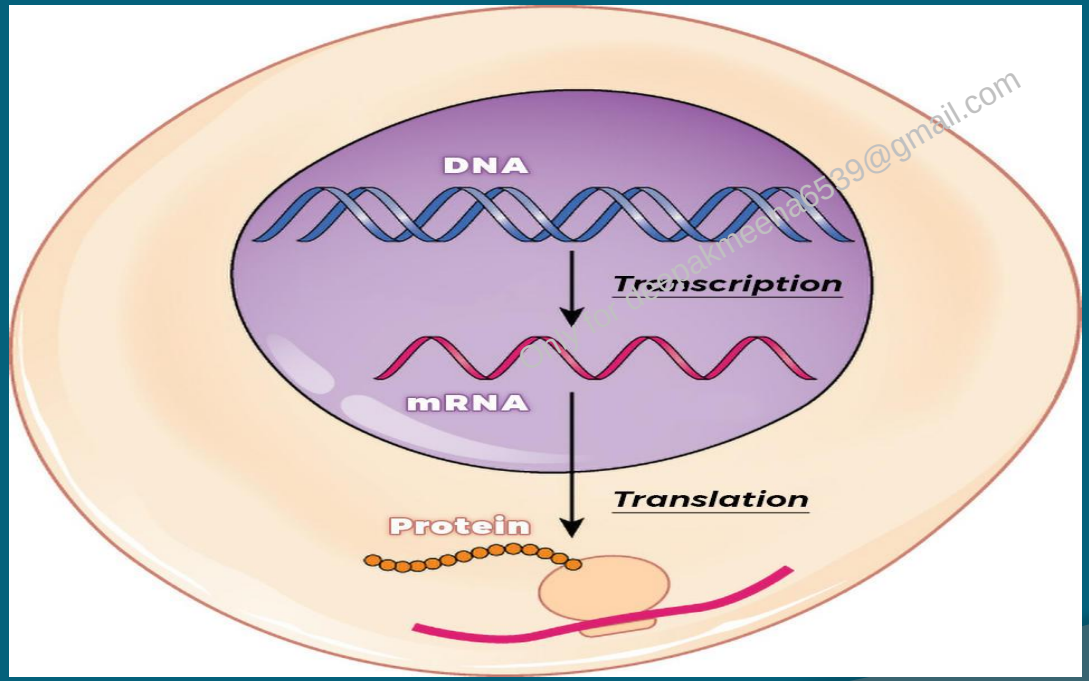


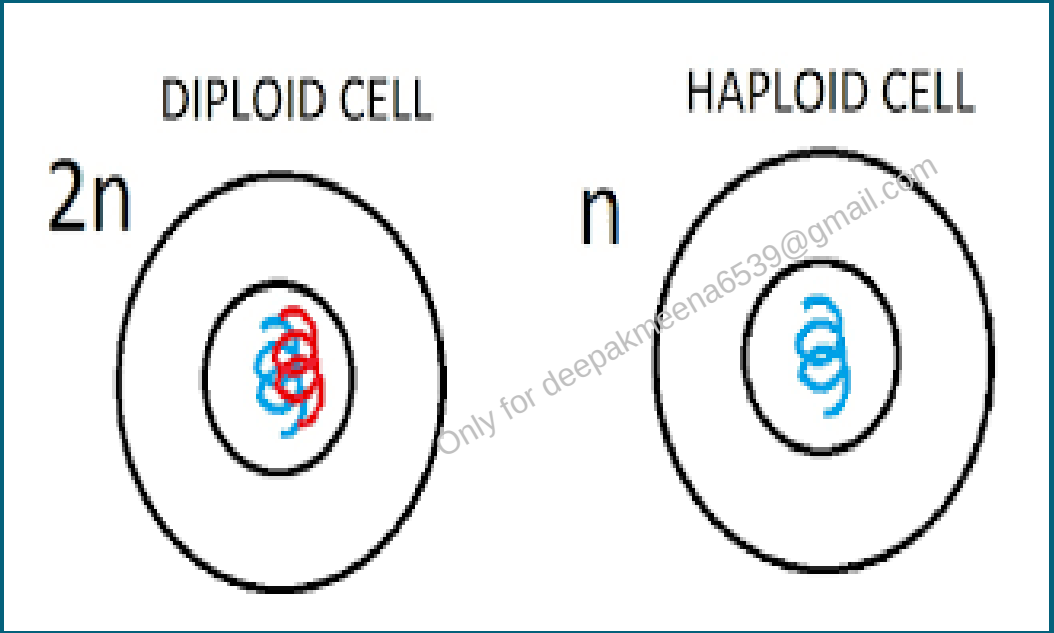
DNA Structure



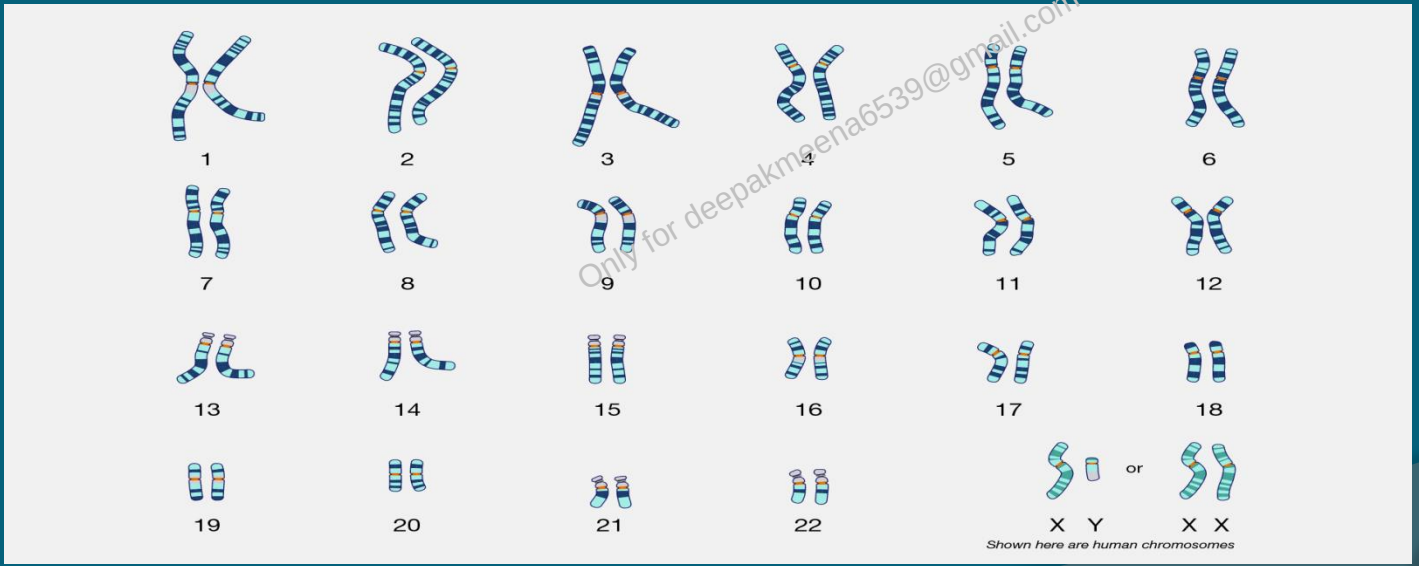


GENE EXPRESSION

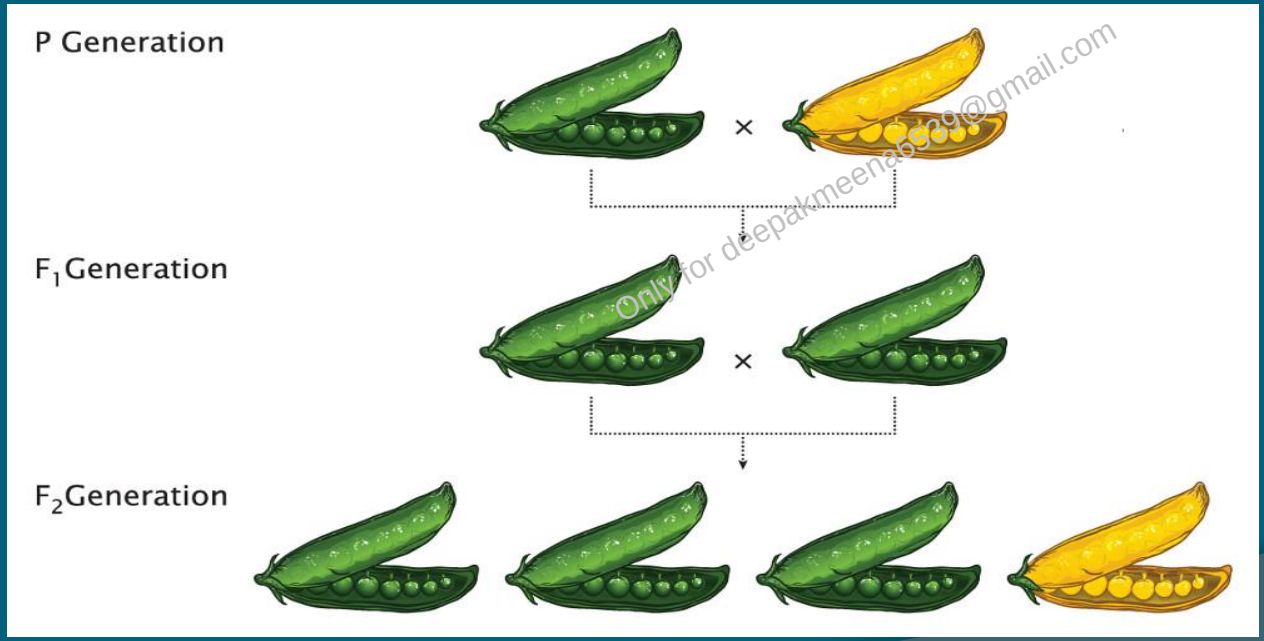




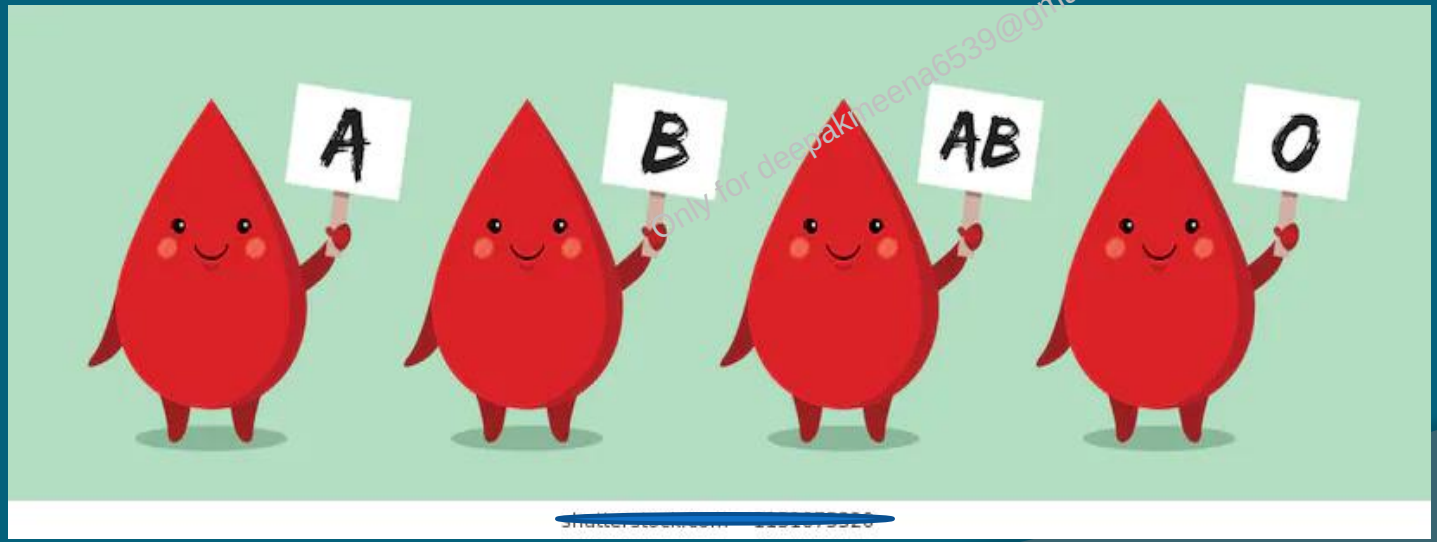
Homologous Chromosomes

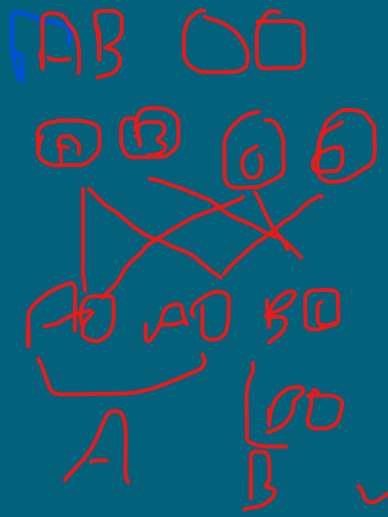


Mendel's Experiments



Blood group inheritance



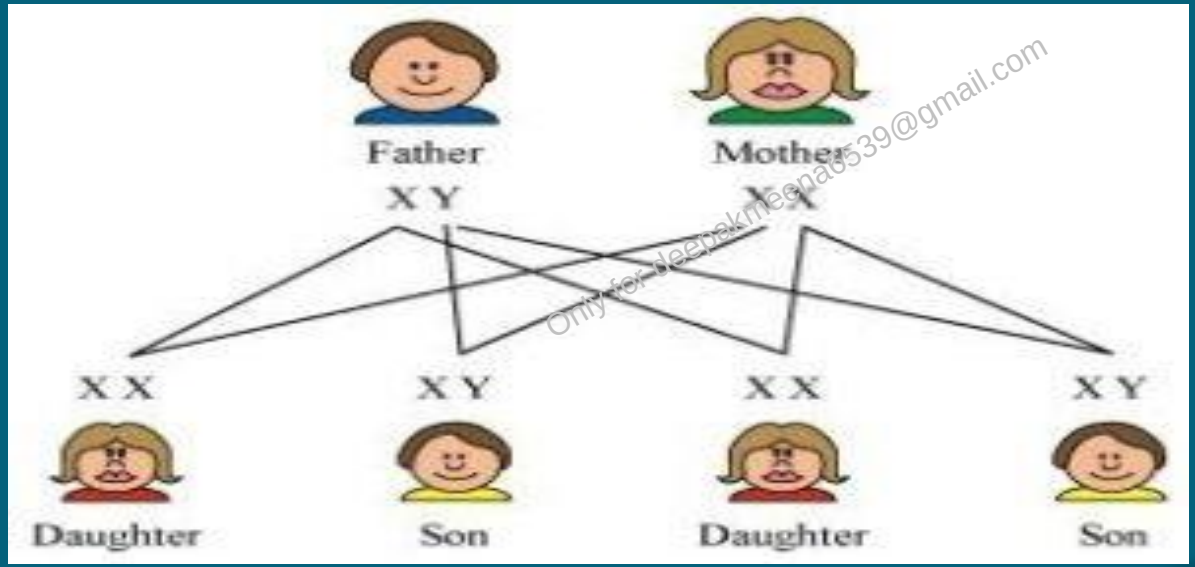


A married couple adopted a male child. A few years later, twin boys were born to them. The blood group of the couple is AB positive and O negative. The blood group of the three sons is A positive, B positive, and O positive. The blood group of the adopted son is

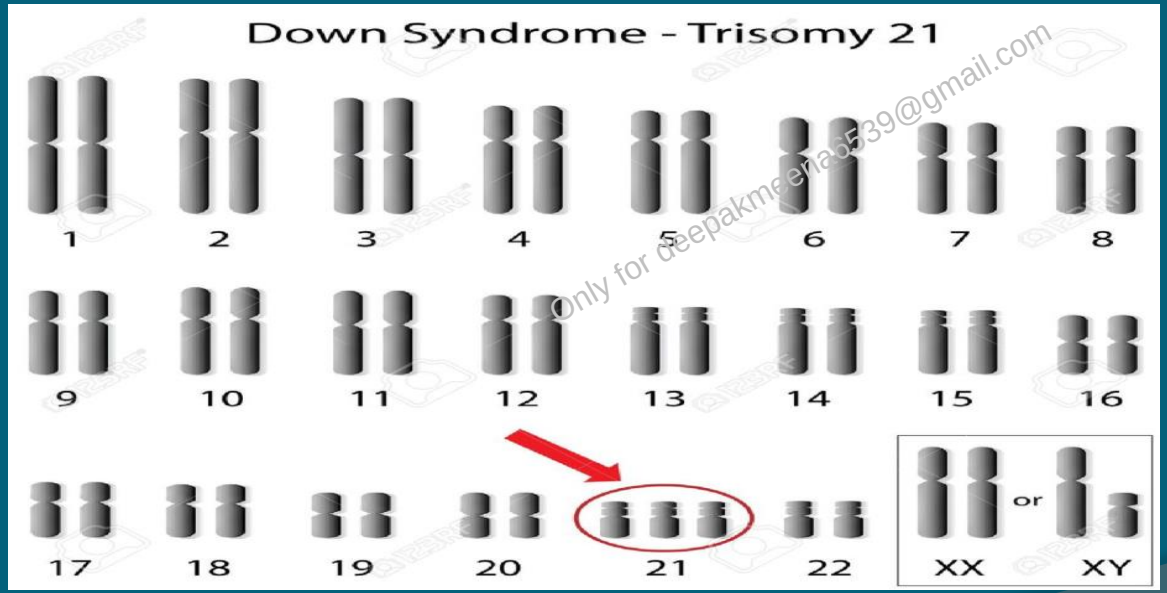
A) O positive B) A positive

C) B positive D) Cannot be determined on the basis of the given data

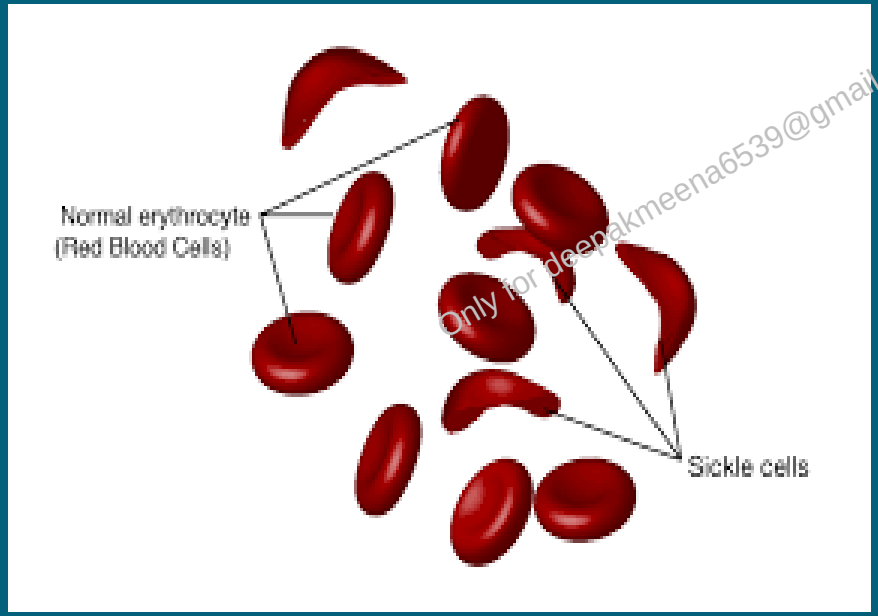
Sex determination



Genetic abnormalities



Gene Defects



In the context of genetic disorders, consider the following:

A woman suffers from colour blindness while her husband does not suffer from it. They have a son and a daughter. In this context, which one of the following statements is most probably correct?

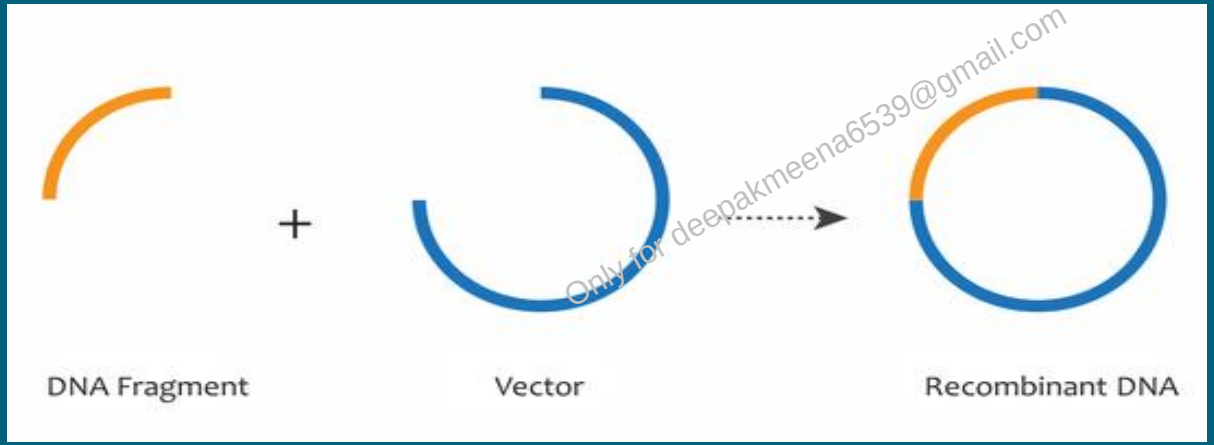
A. Both children suffer from colour blindness.

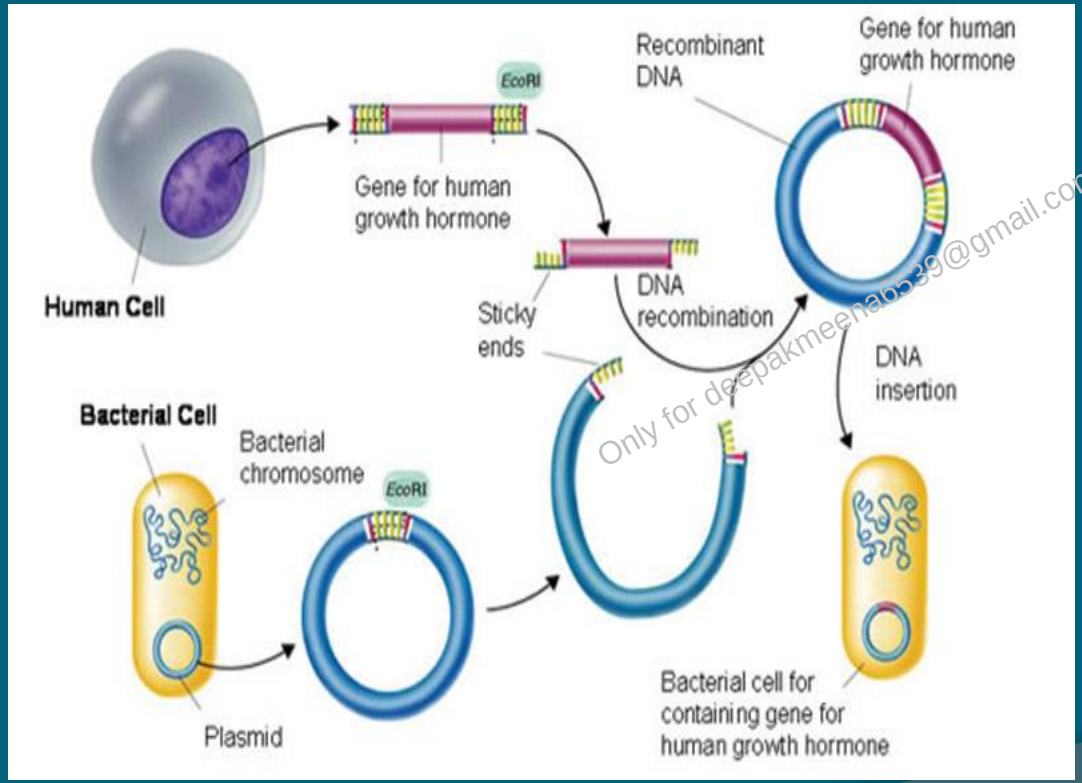
B. Daughter suffers from colour blindness while son does not suffer from it.

C. Both children do not suffer from colour blindness.

D. Son suffers from colour blindness while daughter does not suffer from it.

Recombinant DNA technology





Recombinant DNA technology (Genetic Engineering) allows genes to be transferred

1. across different species of plants
2. from animals to plants
3. from microorganisms to higher organisms

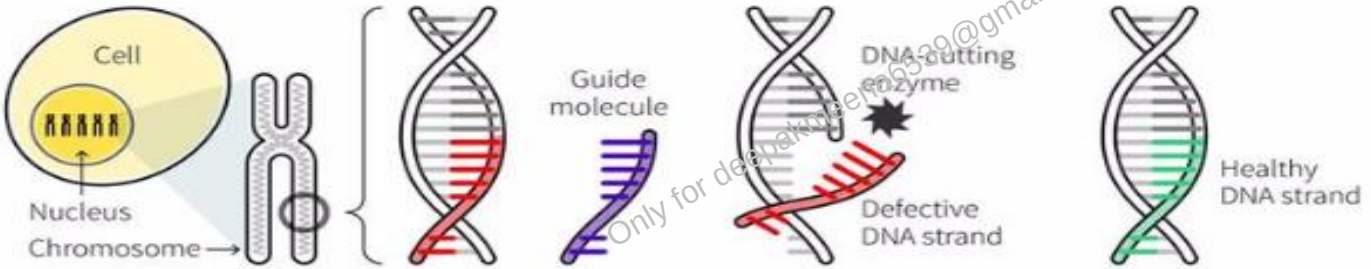
Select the correct answer using the codes given below.

(a) 1 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

DNA editing

A DNA editing technique, called CRISPR/Cas9, works like a biological version of a word-processing programme's "find and replace" function.

HOW THE TECHNIQUE WORKS



A cell is transfected with an enzyme complex containing:
- Guide molecule
- Healthy DNA copy
- DNA-cutting enzyme

A specially designed synthetic guide molecule finds the target DNA strand.

An enzyme cuts off the target DNA strand.

The defective DNA strand is replaced with a healthy copy.

Gene editing


Dolly
THE SHEEP

Animal Cloning