

attached to the Larvae it will develop into female.

(1)

### Sex LINKED INHERITANCE :-

migrate

- i) It is a fact that hereditary characters originate from one generation to other through genes.
- ✓ ii) Genes are present over the surface of chromosomes.
- iii) All such genes which are present in a single chromosome called linked gene.
- iv) The linked gene which are associated with sex chromosomes are known as sex-linked chromosome.
- v) The characters which remain linked with particular sex called sex-linked character.
- vi) ~~At the time of~~ The transmission of sex-linked characters from one generation to other is called sex-linked inheritance.

There are some example of sex-linked disease.

(A) Colour blindness-

(B) Haemophilia-

(A) Colour-blindness:-

- i) It is a hereditary disease. The person (patient) is suffering from colour blindness cannot differentiate between red & green colour.

- ii) If a person is suffering from colour blindness cannot differentiate red colour is known as Protanopia.
- iii) If a person is unable to perceive the green colour is called Deuteronopia.

### Inheritance :-

Case - I:- If a colour blind male marries with normal female

Case - II:- If a colour blind male marries with carrier.

Case - III If a normal male marries with carrier.

Case - IV If a normal male marries with colour blind female.

Case - V If a colour blind male marries with colour blind female.

Symbol

$X^c X^c$  - colour blind female

$X^c Y$  - colour blind Male

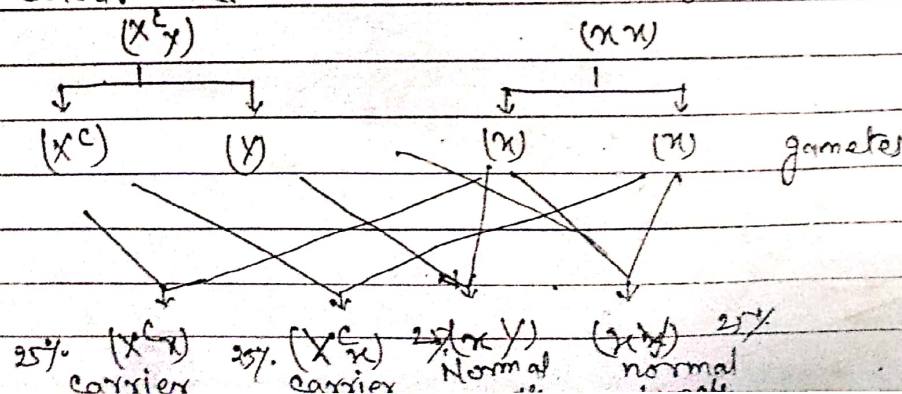
$X^c x$  - carrier

$xx$  - Normal female.

$xy$  - Normal Male.

Case - I:- If a colour blind male marries with normal female.

colour blind male  $\times$  normal female



(3)

classmate

Date \_\_\_\_\_

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Result:-

Daughter - carrier (F) :-  $(X^C X) = 50\%$

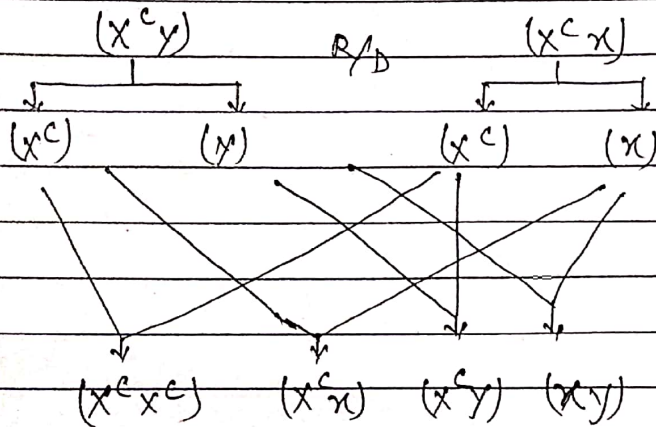
Son - Normal Male (XY) :-  $= 50\%$

~~Normal Female~~ :-

10/08/11

Case-II :- If a colour blind male marries with carrier.

Colour blind male  $\times$  Carrier



Colour blind female	Carrier	colour blind male	normal male
25%	25%	25%	25%

Result :- Daughter - Colour blind female -  $X^c X^c - 25\%$

carrier -  $X^C X - 25\%$

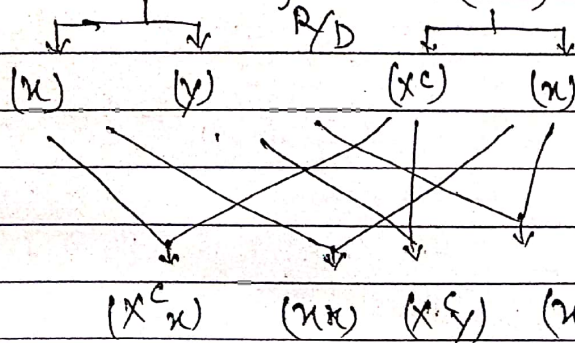
Son - Colour blind male -  $X^c Y - 25\%$

normal male -  $X Y - 25\%$

Case

Case-III :- If a normal male marries with carrier.

normal male (XY)  $\times$  (X<sup>C</sup>X) carrier



colour blind female carrier	normal female	colour blind male	normal male
25%	25%	25%	25%

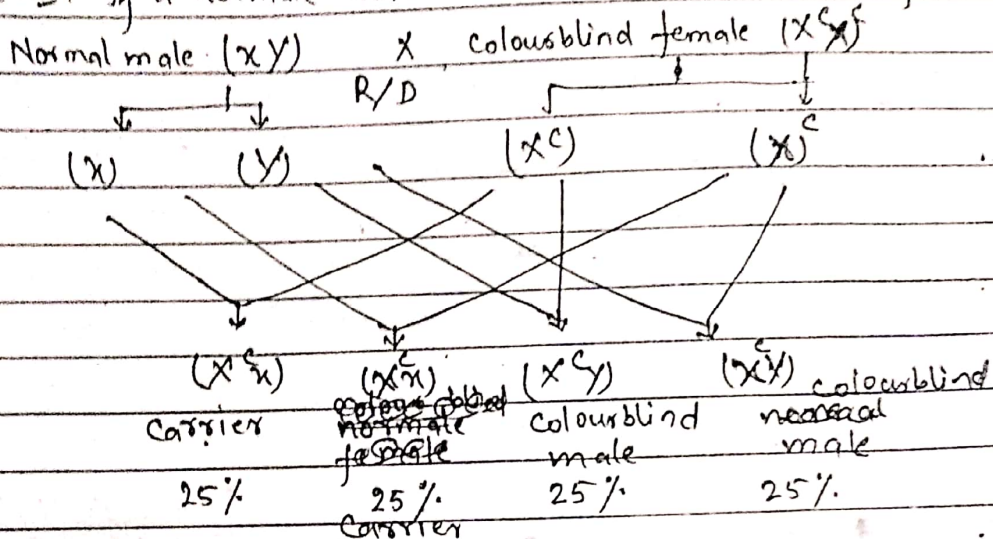
Result :- Daughter - Carrier -  $X^C x$  - 25%.

Normal female -  $xx$  - 25%.

Son - colourblind male -  $X^c y$  - 25%.

normal male -  $xy$  - 25%.

Case-IV:- If a normal male marries with colourblind female.



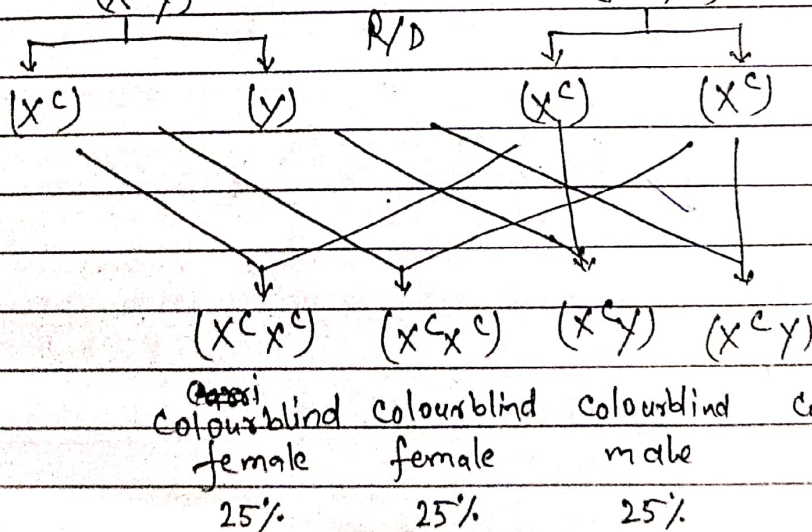
Result:-

Daughter :- Carrier -  $X^c x$  - 50%

Son :- colourblind male -  $X^c y$  - 50%.

Case-V:- If a colourblind male marries with colourblind female

Colour blind male ( $X^c y$ )  $\times$  colour blind female ( $X^c X^c$ )



Result :- Daughter - colourblind female - 50%

son - colourblind male - 50%.