भाग-1

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नामांकन संख्या M 1 5 5 3 3 8 6 0

अनुक्रमांक (अंकों में) 1 8 P 0 1 8 2 3 4 0

अनुक्रमांक (शब्दों में) .....

परीक्षार्थी का पूरा नाम Toonam Tomar

कक्ष निरीक्षक का नाम .....

परीक्षार्थी द्वारा सम्पूर्ण विवरण भरा जाए (To be filled by the Examinee) हस्ताक्षर

R

M.Sc. Internal

2018- भाग-2

चौधरी चरण सिंह विश्वविद्यालय, मेरठ
Ch. Charan Singh University, Meerut

01/5/19

निम्नलिखित विवरण परीक्षार्थी द्वारा स्वयं भरा जाए (To be filled by the Examinee)

परीक्षा का नाम (Name of Exam) M.Sc वर्ष 20 (Year 20.....) 19 भाग/सेमेस्टर (Part / Semester) II Sem

विषय (Subject) Zoology प्रश्न-पत्र/पाठ्यक्रम (Paper /Course) Genetics पेपर कोड सं. (Paper Code No.) H-2063

परीक्षा का दिन (Day of Examination) Thursday दिनांक (Date) 2/5/19

प्राप्तांक एवं पूर्णांक परीक्षकों द्वारा भरे जायें

पूर्णांक (Max. Marks) .....

प्रश्नों की क्रम संख्या	a/I	b/II	c/III	d/IV	e/V	f/VI	g/VII	h/VIII	i/IX	j/X	योग
1	1½	1½	1½							3	3
2	1½	1½	1½								
3	3	2½	3½								7
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											

प्राप्तांक 13

(शब्दों में)	अंकों में

जाँचकर्ता के हस्ताक्षर एवं तिथि

परीक्षक के हस्ताक्षर एवं तिथि

भाग-3

2018-

R

चौधरी चरण सिंह विश्वविद्यालय, मेरठ

आवश्यक निर्देशों हेतु पृष्ठ भाग देखें

Date Stamp to be affixed here

(परीक्षार्थी द्वारा भरा जाए)

परीक्षा का नाम M.Sc भाग/सेमेस्टर II Sem

विषय Zoology

प्रश्न पत्र Genetics दिनांक 2/05/19

परीक्षार्थी का अनुक्रमांक (Roll Number) 1 8 P 0 1 8 2 3 4 0

उत्तर-पुस्तिका क्रमांक KM-I-01-

कालेज कोड 0 1 8

(परीक्षार्थी की श्रेणी)

- संस्थागत ●
- व्यक्तिगत ○
- बैक पेपर ○
- अंक सुधार ○
- भूतपूर्व ○
- एकल विषय ○

नामांकन संख्या (Enrollment Number) M 1 5 5 3 3 8 6 0

पेपर कोड H - 2063

परीक्षार्थी का पूरा नाम Toonam Tomar

कक्ष निरीक्षक का नाम

Section=A

Q=1 Mandal selected plant for his experiment.

Ans = Mandal selected plant for his experiment because pea plant (Pisum Sativum) is the self fertilization and the crossed fertilization plant. pea plant for the self fertilization Plant the anther. for the plant. So, Mandal selected plant for his experiment.

Ans=2 ★ Initiation genetic code - AUG and GUG

- Amino acid code by Codons

Ans=3 Gene bank :⇒ Gene bank

discovered by 1992 in October.

Gene bank ⇒ research for DNA sequence.

Ans=4 PCR :=> Polymerase chain Reaction.

Ans=5 Split gene :=>

- Genes with interrupted to Sequence of nucolides are refard with in a cell gene.
- Usually, interrupted to the Continuous Sequence of Nuclotide gene.

- Discovered by the Richard J. Robert.
- Split gene are two type :-

① Normal split gene
② Interseup fed

Section ⇒ C

Ans = 9 Mendalian principals of genetics

⇒ Mandalian principles of genetics are :-

- There are three low of Mandal :-

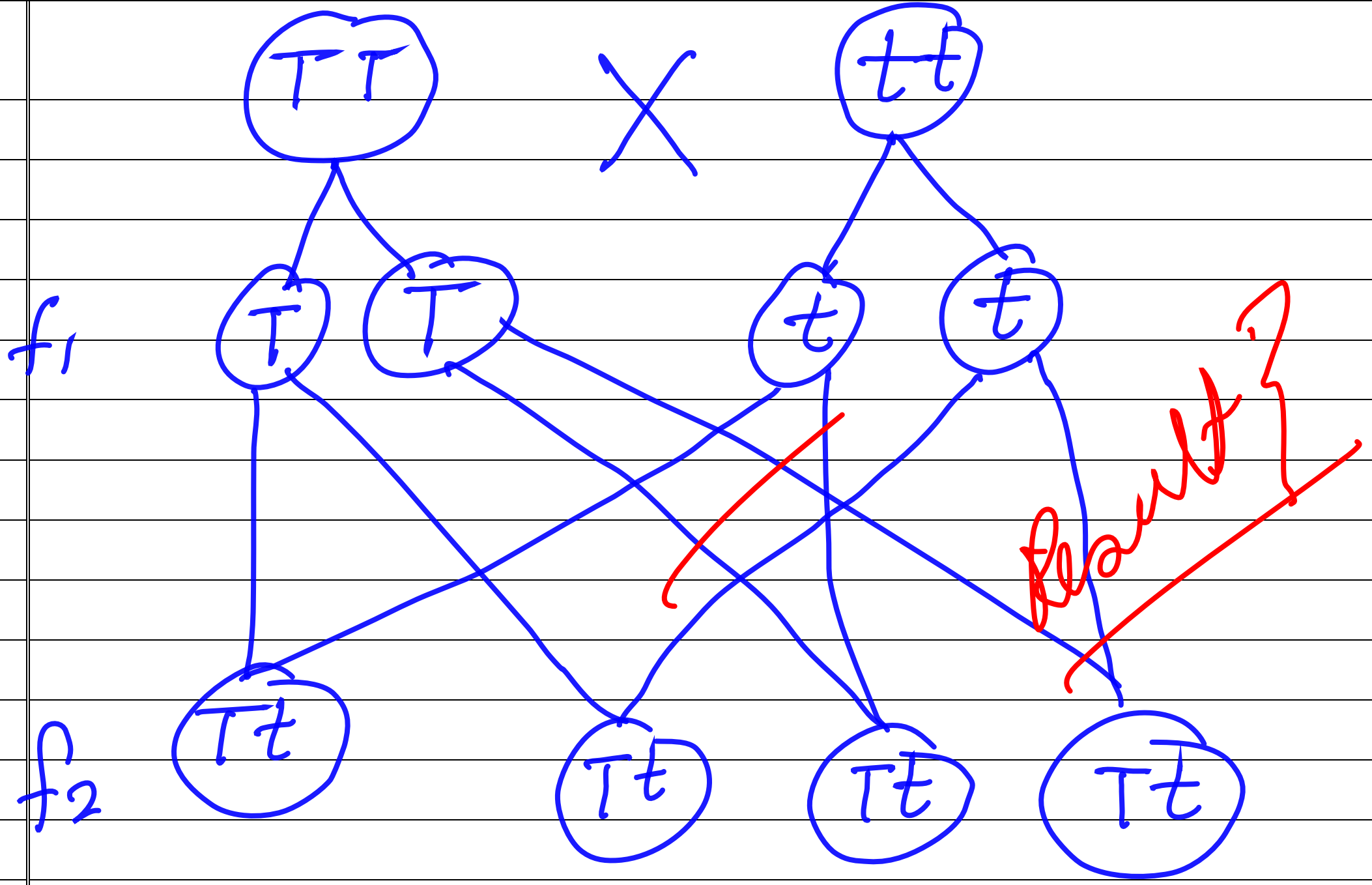
1. Low of Dominance
2. Low of Segregation / purity
3. Low of independent assortment

1. Low of Dominance :- When the two pure (homozygous) between crossed. which the fi generation and

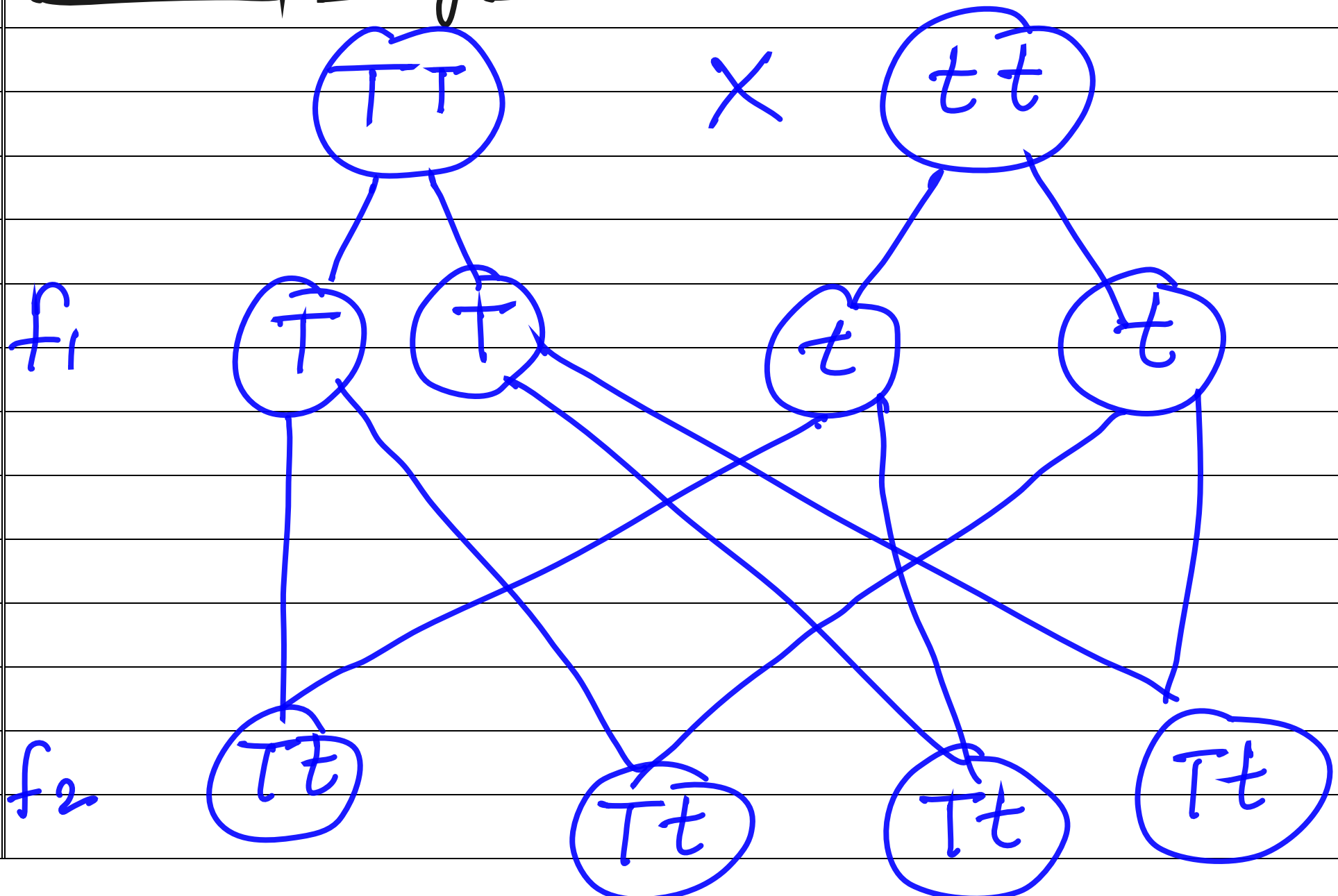
f_1 generation are called Dominace form and The f_2 generation is the Resseciive form.

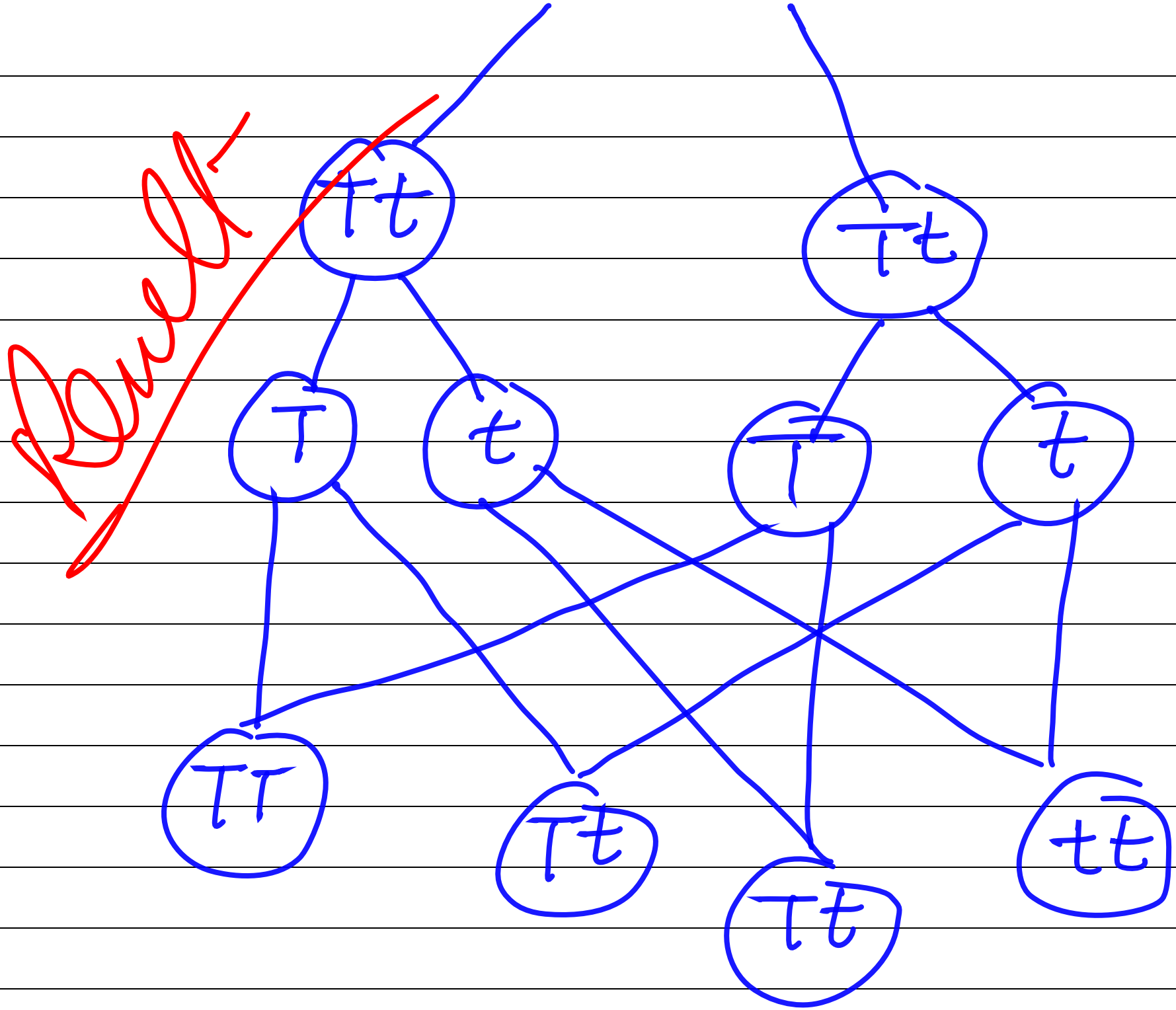
- f_1 generation are called Dominace
- f_2 generation are called Recessive.

- When the Tall and dwarf are b/w crossed for the Dominance and Resseaive form in found.


T T
X
t t
f1
T
T
t
t
fault?
f2
T t
T t
T t
T t

2. Law of Segregation :⇒



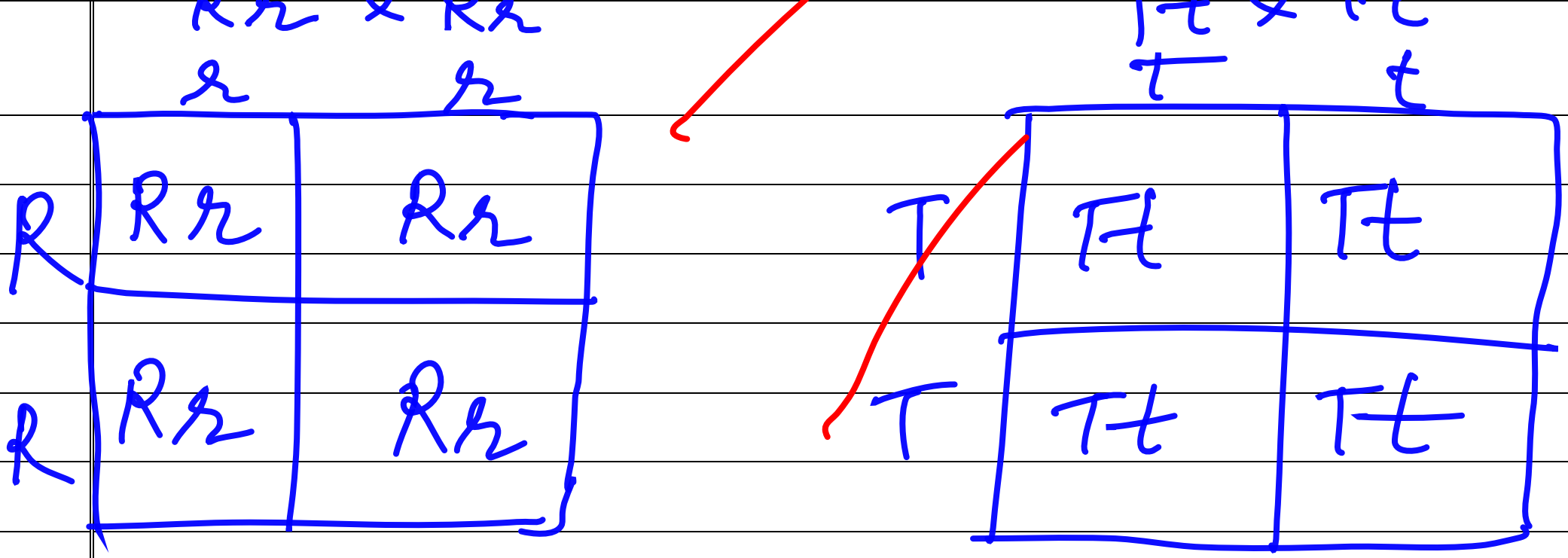

Result
H t
T t
T
t
T
t
T T
T t
t t
T t

- Genotype :- 3 : 1
- Phenotype :- 1:2:1
- When the two pure Chomozygous between crossed and the f1 generation are the f2 the dominance and generation are the Recessive. and when the

two unpure are the crossed between the result of the Genotype 3:1 and phenotype 1:2:1.

3. Low of independent assortment :-

- When the Low of independent assortment of the two pure homozygous between crossed are the form appear in the Dominace form and disappear are the Reserve form and after than Reappear Dominance form.

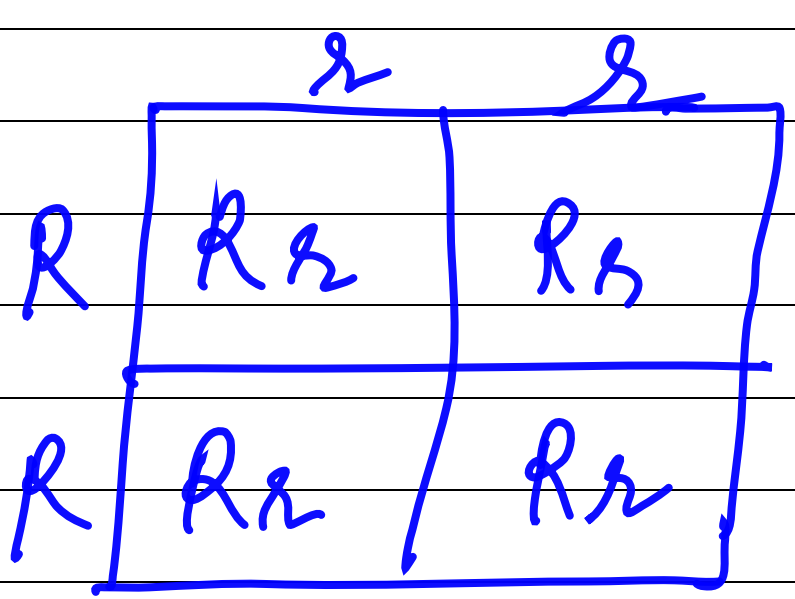


Law of Segregation

Deviation :-

1. Incomplete Dominance
2. Co- Dominance.

1. In Complete Dominance :=>

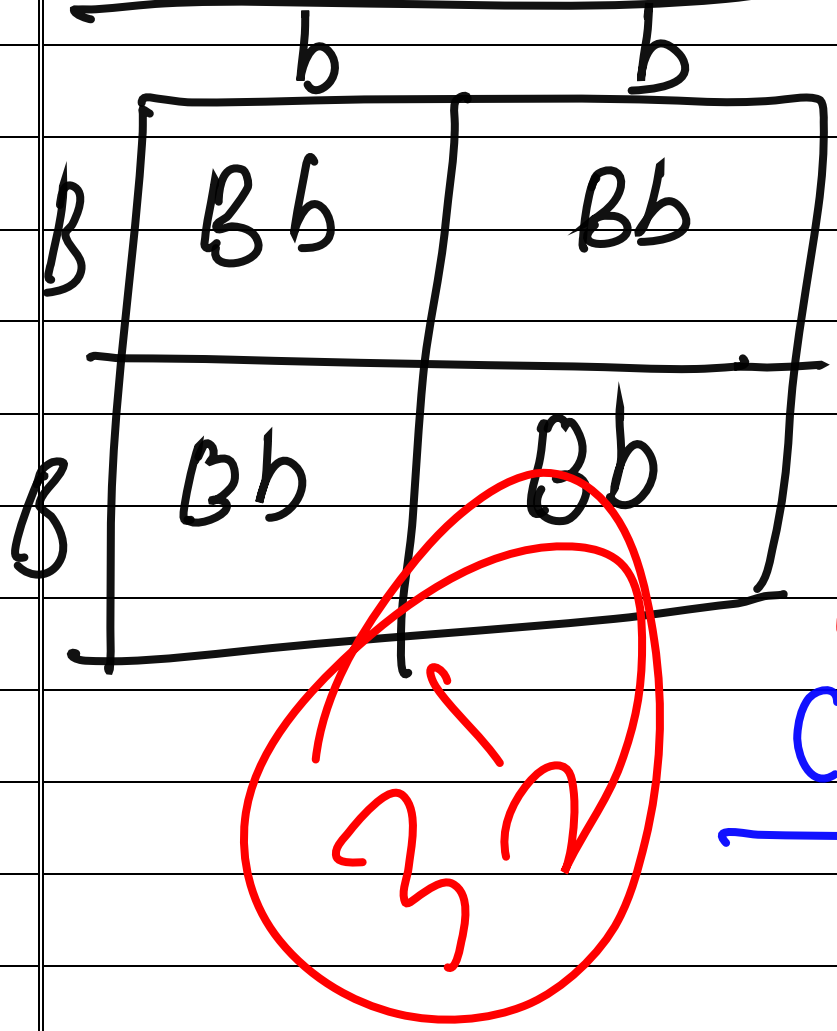


When the Red and white are the crossed and after the result pink colour.

that is pink Colour

This is called In Complete Dominace.

Co- Dominance :->



When the Black and White are the crossed and after than Gray colour. That is called

Co- Dominance.

⇒ Mandal have 7 characters

Characters	Dominance	Recessive
Hight	Tall	Dwarf
Pod colour	Green	Yellow
Pod shape	Smooth	Rinked
Colour of Seed	Yellow	Green
Shape of Seed	Smooth	Rinked

Colour of flowers	Red	White
Shape of flowers	Axil ~~Smooth~~	Terminal ~~Erect~~

Ans=10 Numerial alternation of chromosome

Summary :=>

① Autosomal Chromosome abdomalities

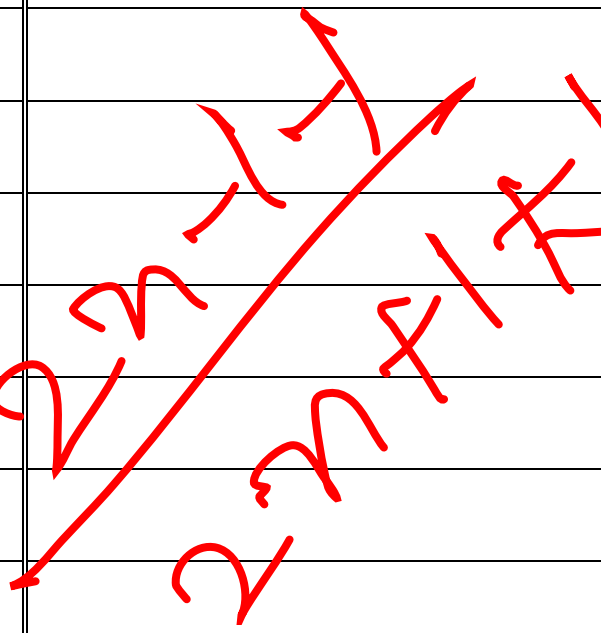
① Numeric abdomilities ② Structural abdomilities

① Numeric abdomilities → Euploidy
→ Aneuploidy.

② Euploidy → Monoploidy (n)
→ Diploidy (2n)
→ Polyploidy (3n, 4n, 5n) etc

(7) Aneuploidy

- Nullisomy (2n-2)
- Monosomy (2n-1)
- Trisomy (2n+1)
- Tetrasomy (2n+2)



(1) Autosomal chromosome abnormality :-

Autosomal chromosome abnormality, it genetics disorder, abnormal observation and the missing of the extend form. This is known as Autosomal chromosomal abnormality.

(2) Numeric abnormality :- Numeric abnormality are two types

① Euploidy :⇒ Euploidy are the three types :-

① Monosomy ploidy. :⇒ Lack the one pair of chromosome is known as Monosomy (n).

② Diploidy :⇒ (2n) / (2x)

③ Triploidy :⇒ (3n, 4n, 5n) / (3x, 4x, 5x)

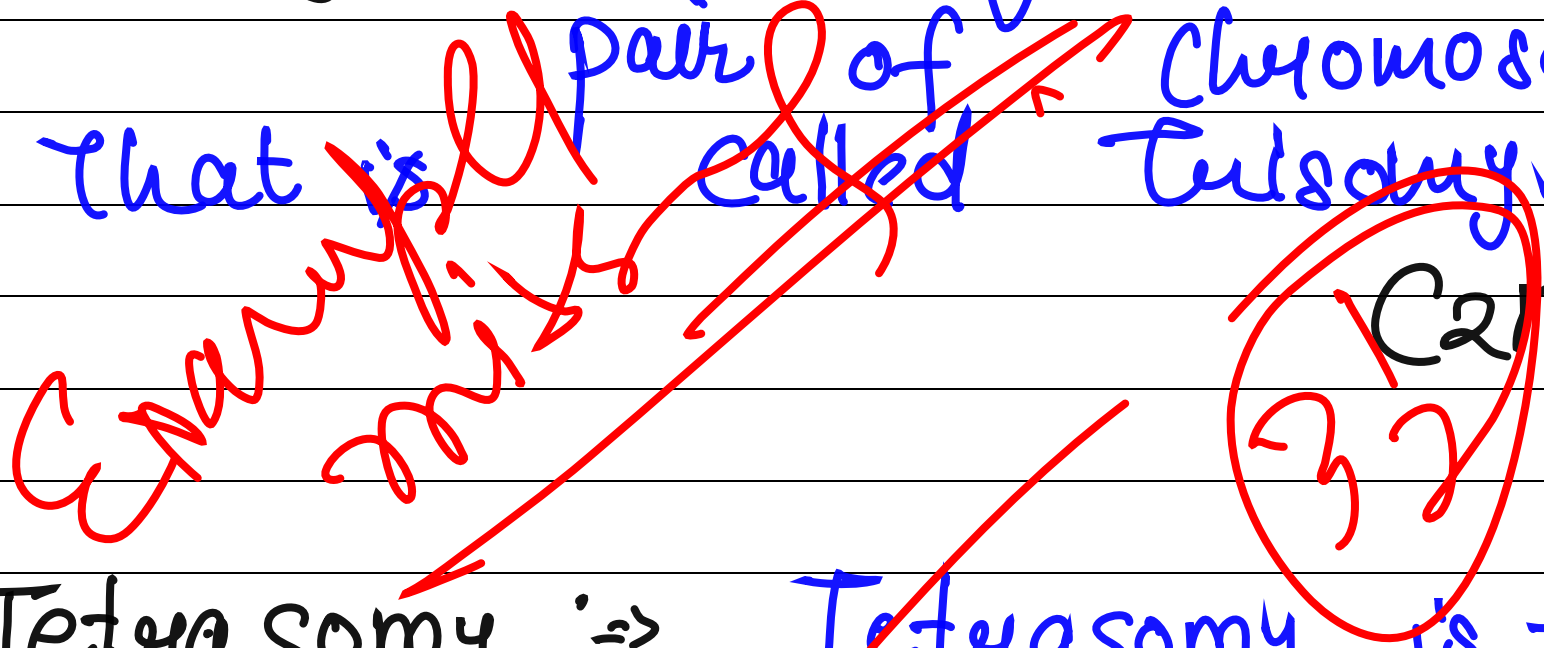
(9) Aneuploidy :- are the four types :-

(1) Nullisomy :- Lack the one pair of chromosome. That is called Nullisomy (2n-2)

(2) Monosomy :- Less the one pair of chromosome that is called monosomy. (2n-1)

(3) Trisomy :- Trisomy is the one pair of Chromosome. That is called Trisomy.

(2n+1)



(4) Tetrasomy :- Tetrasomy is the two pair of Chromosome That is called Tetrasomy.

(2n+2)

Section ⇒ B

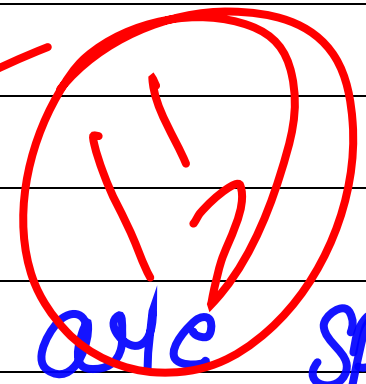
Ans=6

Polytene chromosome :⇒

- Described E. G. Balbiani in 1981 in Chironomus Nudges
Study in Drosophilia Melanogaster

Poly = Many

tenes = stands



polytene chromosome are specific Intraphase chromosome Contain thousand of DNA strand;

e.g. they are very large.

Ans=7 Difference b/w Heterochromatin and Euchromatin.

Exon	Intron
① Coding Sequence of gene.	① Non-Coding Sequence of a gene
② functional part of a gene	② Non-functional part of a gene.

(3) Contain non-repeted Sequence of nitrogen base.	(3) Contain repted sequence of nitrogen base.
(4) Exon found in hn mRNA as well as mRNA	(4) Intron found in hn mRNA.