



LGS GROUP OF COLLEGES

A PROJECT OF LAHORE GRAMMAR SCHOOL

Sheet # _____

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 Subject: Biology Test No: Assignment Date: 22-11-2024

A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	Marks Obtained
1				6				11				16				
2				7				12				17				
3				8				13				18				
4				9				14				19				
5				10				15				20				

Biology
 Topic: Assignment

Question no 02:-

:- (i) :-

During crossing over there are two types of combinations:

Parental combinations:

These are the combinations of the alleles that are present in the original parents. They are also known as non-recombinant or non crossing over.

Non parental combinations:

These are the new combinations of alleles that are not present in the original parents. They are formed due to crossing over and recombination and are also known as recombinant or crossing over types.

:- (ii) :-

Epistasis:-

When an effect caused by a gene or gene pair at one locus interferes with or hides the effect caused by another



gene or gene pair at another locus it is called epistasis

- Bombay Phenotype shows epistatic effect
- Pleiotropy.

When a single gene affects two or more traits the phenomenon is called pleiotropy. Such a gene with multiple phenotypic effects is called pleiotropic.

- White eye gene in *Drosophila* also affects the shape of sperm storing organs.

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Polygenic traits:

A continuously varying trait is encoded by alleles of two or more different gene pairs found at different loci, all influencing the same trait in an additive way. These quantitative traits are called polygenic traits and their genes are called polygenes.

Question no 03:-

Erythroblastosis foetalis:-

Maternal foetal Rh incompatibility results when an Rh^- woman married to an Rh^+ man conceive a child who is Rh^+ . If the man's genotype is DD all of their offspring (Dd) will be Rh^+ if the man's genotype is Dd



half of their offspring with O^d genotype will be Rh⁺.

Effects:

if RBC of Rh⁺ foetal cross the placental barrier and enter in Rh⁻ mother's blood stream the mother's immune system reacts to foetal Rh antigen stimulus by producing a large number of anti Rh antibodies.