

4.1 MENDELIAN GENETICS: MONOHYBRID & DIHYBRID

a) Define Terminologies Used in Genetic Inheritance

Exercise 4.1 (a): Match the following terms with their correct description



Gene	A segment of DNA that serve as a unit of hereditary information Eg: Flower position
Allele	The genetic constitution for a certain character of an organism. Eg: AA or Aa or aa
Locus	A cross between male and female from the same plant or same generation. Eg: Tt x Tt
Dominant allele	A cross between an individual of unknown genotype with a homozygous recessive individual. Eg : T__ x tt
Recessive allele	Allele that can be expressed in homozygous or heterozygous condition.
Homozygous	Alternative forms of a gene
Heterozygous	The position of a gene on a chromosome
Genotype	Allele that can only be expressed in homozygous condition. Eg : aa
Phenotype	Having 2 identical alleles for a certain gene. Eg : AA or aa
Test cross	Having 2 different alleles for a certain gene. Eg : Aa
Self cross	<ul style="list-style-type: none"> Organisms that are homozygous for any given genotype When they are self-fertilized, they produce offspring that has the same phenotype as the parent; generation after generation Eg: TT @ tt, TTAA @ ttaa @ TTaa @ ttAA
Pure or True breeding	The physical appearance for a certain character of an organism. Eg ; Terminal,Axial