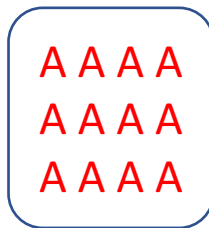


Population 1      Population 2

Case 1



$$F_{st}=1.00$$

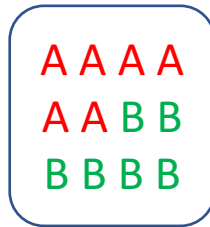
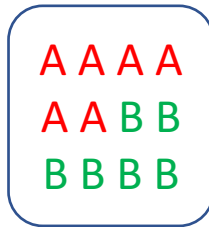
Variation b/w populations = 100%

Variation within populations = 0%

If  $p_i$  is frequency of allele  $i$ , Heterozygosity is calculated as:

$$H = 1 - \sum p_i^2$$

Case 2



$$F_{st}=0.00$$

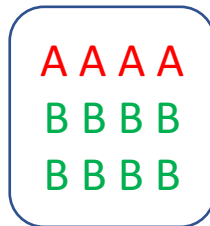
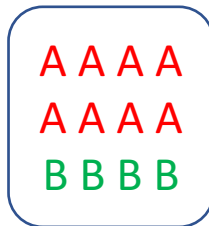
Variation b/w populations = 0%

Variation within populations = 100%

The extent to which variation is between populations is then calculated as:

$$F_{ST} = (H_T - H_S) / H_T$$

Case 3



$$F_{st}=0.11$$

Variation b/w populations = 11%

Variation within populations = 89%