

Question Number	Answer	Mark
5 (a)	<ol style="list-style-type: none"> 1. {position / location / eq} of {gene / allele}; 2. on a chromosome / eq ; 	(2)

Question Number	Answer	Mark
5 (b)(i)	C ;	(1)

Question Number	Answer	Mark
5(b)(ii)	<ol style="list-style-type: none"> 1. higher number of alleles (per locus) / 7.7 compared with 4.6 for Q ; 2. (means) higher genetic variation / greater genetic diversity / more allele combinations / eq ; 3. idea that {greater variety of alleles / eq} in gene pool/larger gene pool ; 4. idea that {alleles / genotypes} may give a selective advantage for changes in the environment / eq ; 5. (therefore) more likely to survive and breed / eq ; 6. passing on these favourable allele combinations / eq ; 7. ref to natural selection ; 8. ref to (change in allele frequency) over many generations ; 	(5)

Question Number	Answer	Mark
5(c)	<ol style="list-style-type: none"> 1. chance / eq ; 2. ref to difference in sample size, e.g. more dogs in Group 1 than in Group 2 ; 3. ref to rare alleles in group 1 ; 4. idea of how representative the samples are of the whole breeding population ; 	(2)

Question Number	Answer	Mark
5(d)	D ;	(1)