

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

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

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

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

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