

Question Number	Answer	Additional guidance	Mark																								
7(c)	<p>An answer that includes the following points:</p> <ul style="list-style-type: none"> • $N(N-1)$ correctly calculated (1) • $\sum n(n-1)$ correctly calculated and inserted into formula (1) • calculation of D for lake Apoyo (1) • lake Apoyo has higher biodiversity (as 3.05 is larger than 2.8) (1) 	<table border="1"> <thead> <tr> <th>Species</th> <th>Number of individuals (n)</th> <th>n(n-1)</th> </tr> </thead> <tbody> <tr> <td><i>A. astorquii</i></td> <td>156</td> <td>24180</td> </tr> <tr> <td><i>A. chancho</i></td> <td>45</td> <td>1980</td> </tr> <tr> <td><i>A. flaveolus</i></td> <td>78</td> <td>6006</td> </tr> <tr> <td><i>A. globosus</i></td> <td>8</td> <td>56</td> </tr> <tr> <td><i>A. superciliosus</i></td> <td>17</td> <td>272</td> </tr> <tr> <td><i>A. zaliosus</i></td> <td>12</td> <td>132</td> </tr> <tr> <td></td> <td>(N)=316</td> <td>$\sum n(n-1)=32626$</td> </tr> </tbody> </table> <p>D= 3.0509 / 3.05 / 3.051 / 3.1 / 3.0 / 3</p> <p>ecf applies</p>	Species	Number of individuals (n)	n(n-1)	<i>A. astorquii</i>	156	24180	<i>A. chancho</i>	45	1980	<i>A. flaveolus</i>	78	6006	<i>A. globosus</i>	8	56	<i>A. superciliosus</i>	17	272	<i>A. zaliosus</i>	12	132		(N)=316	$\sum n(n-1)=32626$	(4)
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Question Number	Answer	Additional guidance	Mark
7(d)	<p>An answer that includes the following points:</p> <ul style="list-style-type: none"> • q^2 correctly calculated (1) • ($\sqrt{p^2}=0.6$ and) $\sqrt{q^2}=0.4$ (1) • allele frequency has {not changed / remained the same} (1) 	<p>128÷800 or = 0.16</p> <p>no ecf</p> <p>ecf applies from incorrect p and q values in working</p>	(3)