Question Number	Answer	Additional guidance	Mark
8(c)(i)	An answer which includes the following points: • (count) number of species (1) • {area / size} of habitat (1)	ACCEPT per unit area	**(2)**

Question Number	Answer	Additional guidance	Mark
8(c)(ii)	• (D =) $\frac{N(N-1)}{\sum n(n-1)}$	ACCEPT other correct equations e.g. simple biodiversity index = species richness ÷ species evenness	**(1)**

Question Number	Answer
***8(d)**	Answers will be credited according to candidate's deployment of knowledge and understanding of the material in relation to the qualities and skills outlined in the generic mark scheme. The indicative content below is not prescriptive and candidates are not required to include all the material indicated as relevant. Additional content included in the response must be scientific and relevant. <u>Basic</u> • increasing numbers of wolves (until 2003) / decrease in number of wolves (from 2007 to 2010) • overall increase in wolves / 20 more wolves in 2010 (than in 1995) • the numbers of elk decreased as they were hunted by the wolves • overall decrease in numbers of elk (from 1995 to 2010) • the number of cottonwood shoots rapidly increased (after 2003) • the number of beaver colonies increased from 1 (in 1999) to 12 (in 2009) <u>Linkage</u> • the numbers of cottonwood shoots increased {when the numbers of elk decreased / as they weren't being eaten} • beavers and elk have similar niches / beavers were outcompeted for young tree shoots by elk • beaver {numbers/colonies} started to increase when {elk population size decreased / more shoots were available} • discussion of causes of decrease in wolf population e.g. decrease in elk food source • introduction of wolves increases biodiversity <u>Sustained</u> • {more ponds / new habitat} increase {number of species / species richness / biodiversity} • more trees (woodland and riverside habitats) increase {number of species / species richness / biodiversity} • biodiversity increases due to additional species in Yellowstone National Park e.g. wolf **(6)** **Expert**