**Task 2: Part B Marking Guide**

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| **Description** | **Marks** |
| **1. Describe four (4)** **factors that could affect the population size and distribution of woylies.** | **/4** |
| * predators may limit or reduce woylie numbers | 1 |
| * resources such as plant material for cover and nesting, food sources | 1 |
| * disease such as parasites that can weaken individuals | 1 |
| * climate, extreme weather events (drought, flood, fire) | 1 |
| **2. Explain how two (2)** **activities carried out by woylies help to keep the woodlands healthy and productive.** | **/4** |
| * by feeding on plants and fungi, it helps disperse these throughout the ecosystem * trees and plants rely on some types of fungi to help them to gain nutrients | 1–2 |
| * digging for food * buries leaf litter reducing fire risk and helping in nutrient recycling for plants to grow | 1–2 |
| **3(a) Describe the trend in capture rates of woylies between 1974 and 1996.** Use data to support your answer. | **/2** |
| * capture rates have increased * from 10% or less to a range of between 40–60% | 1–2 |
| **3(b) Suggest two (2)** **reasons for this trend.** | **/2** |
| Any two of the following:   * resources e.g. food availability increased * fox baiting programs have reduced the number of predators * translocations of woylies – reintroductions and establishment of new populations | 1–2 |
| **3(c)(i) Explain how two (2)** **hypotheses have been discounted based on the evidence provided.** | **/2** |
| * no significant loss/change of habitat (nor food resources) | 1 |
| * fire history is not related to the declines (nor human interference) | 1 |
| **3(c)(ii) Explain two (2)** **hypotheses that are still being considered by scientists.** | **/2** |
| * disease: parasites have been shown to cause population decline in other species | 1 |
| * predators: either made more vulnerable by other factors (e.g. disease) or increased numbers of predators | 1 |
| **3(c)(iii) Which hypothesis is considered the most likely cause for the decline in the population of woylies? Explain why.** | **/2** |
| * disease | 1 |
| * two parasites have been linked to woylie deaths | 1 |
| **3(d) Suggest two (2)** **reasons for the variation between the sites when the populations began to decline.** | **/2** |
| Any two of the following:   * disease may spread in one population before it reaches another * there may be different numbers of predators in these populations * different habitat quality (i.e. carrying capacity) e.g. differences in available food and shelter | 1–2 |
| **Total marks** | **/20** |