

Question 3**(10 marks)**

- (a) State **one** reason why scientists use past data when studying species distribution. (1 mark)

Description	Marks
States one reason why scientists use past data.	1
Total	1
Answer could include but is not limited to: <ul style="list-style-type: none"> • they can be used to compare past and current data to determine if species distribution have changed • comparison of past and present data allows scientists to see if species distribution have changed. 	
Accept other relevant answers.	

- (b) Dibblers are carnivorous marsupials which feed on small vertebrates such as mice, birds and lizards as well as insects and other invertebrates. Explain how the presence of dieback may have impacted the population of dibblers. (3 marks)

Description	Marks
Explains the effect of dieback on the dibbler.	3
Describes the effect of dieback on the dibbler.	2
States the effect of dieback on the dibbler.	1
Total	3
Answer could include but is not limited to: Explanation <ul style="list-style-type: none"> • Dieback causes the death of trees, which destroys the dibbler's habitat causing the dibbler population to decrease because of increased predation/loss of food source Description <ul style="list-style-type: none"> • Dieback causes the death of trees, which destroys the dibbler's habitat causing the dibbler population to decrease Statement <ul style="list-style-type: none"> • Dibbler population decreases. 	

- (c) State **one** reason why scientists would be interested in predicting suitable habitats of animal species. (1 mark)

Description	Marks
States one reason why scientists predict habitats.	1
Total	1
Answer could include but is not limited to: <ul style="list-style-type: none"> • help sustain biodiversity • ensure a species/ecosystem survives • support/create conservation decisions • recreation/ecotourism. 	
Accept other relevant answers.	

Question 3 (continued)

- (d) Describe why genetic diversity is important to the survival of a species. (2 marks)

Description	Marks
Describes why genetic diversity is important to the survival of a species.	2
States why genetic diversity is important to the survival of a species.	1
Total	2
Answers could include but are not limited to: Description: Genetic diversity results in variation in a population which may lead to individuals being able to withstand an environmental change Statement: Genetic diversity leads to variation in a population.	