

- (f) Name **two** abiotic factors in this river system that might be altered by human activity. Explain how these changes could affect the ecosystem. (6 marks)

Description	Marks
Three marks for each abiotic factor. Maximum six marks.	
Names a feasible abiotic factor	1
Explains clearly how the changes impact on the ecosystem	2
States some relevant information about how the changes impact on the ecosystem	1
<b>Total</b>	<b>6</b>
Answers may include, but are not limited to the following: <ul style="list-style-type: none"> <li>• temperature decrease in aquatic organisms that are not temperature tolerant</li> <li>• pH decrease in aquatic organisms that are not pH tolerant</li> <li>• water levels due to damming or irrigation usage increase in aquatic organisms that favour still water decrease in aquatic organisms that favour flowing water</li> <li>• salinity reduction in non-salt tolerant plants, reduction in non-salt tolerant aquatic animals migration of salt tolerant organisms from estuary into river system</li> <li>• nutrient levels encourage growth of algae, eutrophication, etc.</li> <li>• turbidity impact on photosynthetic organisms, energy in ecosystem.</li> </ul>	

- (e) Give **two** examples of how humans can alter the water cycle and for each example explain the impact on the natural ecosystems. (6 marks)

Description	Marks
Three marks for each example. Maximum six marks.	
Gives a valid example of how humans can alter the water cycle	1
Explains the impact on the natural ecosystems	2
States an impact on the natural ecosystems	1
<b>Total</b>	<b>6</b>
Answer could include: <ul style="list-style-type: none"> <li>• agriculture/use of water in dry areas/removal of groundwater from wells will cause changes in the water table, that may cause trees/plants to die out</li> <li>• industry if used to cool materials in the production of goods the heated waste water may be put into waterways, changing the temperature, hence the environment</li> <li>• construction of dams or water abstraction from rivers stops water from flowing downstream, hence impacts on plants and animals in this environment</li> <li>• deforestation removal of trees will reduce the amount of water in the soil and this will affect the plants and animals living in the area as well as cause soil erosion</li> <li>• urbanisation removal of natural waterways, hence change in the natural environment/habitat for native plants and animals.</li> </ul> Accept other relevant answers.	

**Question 5****(6 marks)**

For copyright reasons this text cannot be reproduced in the online version of this document.

For each of the following possible climate changes, explain the impact they might have on an Australian biological community.

Description	Marks
Three marks for each effect of climate change, up to six marks.	
Explains clearly how the change impacts biological communities	3
Outlines relevant information about how the change impacts biological communities	2
States a relevant change	1
<b>Total</b>	<b>6</b>
Answer could include:	
<ul style="list-style-type: none"><li>increased land temperature and a decline in rainfall → decreased numbers of organisms that are not temperature tolerant and a decreased numbers of organisms in inland waters</li><li>increased acidity of seawater → coral reef destruction, hence decreased numbers of organisms living in a reef community.</li></ul>	
Accept other relevant answers	