

2001 HIGHER SCHOOL CERTIFICATE EXAMINATION

Biology

Section I – Part B (continued)

Marks

Question 19 (6 marks)

In your Biology course, you performed a first-hand investigation to gather information about structures in plants that assist in the conservation of water.

(a) Describe the procedure you followed.

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..... We first got a medium size te
..... measuring cylinder and filled it
..... up with red dye water 3/4 of the
..... cylinder. We then marked the water
..... level, then placed a celery stick
..... in there. We left it in a cool area
..... for about a day or 2, and found
..... that the ~~tm~~ tips of the celery were
..... red. Travelling through the middle.

(b) Identify TWO safe work practices needed during this investigation.

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..... - choosing the right type of
..... plant
.....
..... - choosing the right place to
..... store it.

Marks

Question 20 (7 marks)

Name ONE example of an Australian endothermic animal and ONE example of an Australian ectothermic animal, and summarise their responses to the following environmental changes. Give your answer in the form of a table.

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Change 1: The ambient temperature rises well above the average daily temperature range.

Change 2: The ambient temperature drops well below the average daily temperature range.

Endothermic animal: Fish, Amphibian and reptiles.

Ectothermic animal: mammals,

Fish	MAMMALS
<p>change 1.</p> <ul style="list-style-type: none"> - usually fish hide behind a rock or stay close to above the water but in the water the salt could increase to show the change in the reaction. <p>This change is a physical change. They excrete more Ammonia.</p> <p>CHANGE 2.</p> <ul style="list-style-type: none"> - Salt is more concentrated in the water and in some circumstances can be less. 	<p>CHANGE 1</p> <ul style="list-style-type: none"> - Choose bumps, usually some mammals are nocturnal. Shelter is also a significant factor. <p>CHANGE 2</p> <ul style="list-style-type: none"> - Choose bumps, again covered in warm places, caves, between rocks. This is a physical change.

Question 21 (4 marks)

Sutton, Boveri and Morgan worked in the field of genetics.

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Describe the contribution made by TWO of these scientists to the understanding of the chromosomal nature of inheritance.

Sutton, Boveri and Morgan investigated the understanding of the chromosomal nature of inheritance they found more evidence toward Gregor's experiment and lead to their own by seeing how chromosome double up and how one characteristic is past on to one generation to another.