

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.

4

Well you would have to put  
the plants in plastic bags and  
see that the plants sweat  
which release water, plants  
would get the energy from the  
sun to produce water  
and oxygen.

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

2

One safe work practice was not  
to touch the plant till it  
was finished and two would  
be to make sure it does  
not go on your skin.

**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.

7

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: ..... Dog .....

Ectothermic animal: .....

Endothermic Animal * Dog	<u>Change 1</u> panting - keeps them cool	<u>Change 2</u> shivering - keep them warm, blood is being pumped around the body.
Ectothermic Animal *	<u>Change 1</u>	<u>Change 2</u>

**Question 21** (4 marks)

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

4

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

They Sutton and Boveri created a crystallized DNA structure which was helped by Morgans findings to receive a clearer picture of the DNA structure, also by using X-rays.