

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

.. Firstly using blue food colouring and mixing it in water making it coloured and to ensure the experiment worked. Secondly with a piece of celery, ~~and~~ placing it in mixture and leaving it for a few days we've discovered through our observation how plants assist in the conservation of water having to witness the blue food dye travelling through the celery and ending up in the leaves of the vegetable.

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

2

.. Allowance of time for the water-dye solution to travel  
.. having ~~the~~ coloured water using dye to actually see ~~how~~ the experiment to its full advantage.

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: Kangaroo.....

Ectothermic animal: Bat.....

Endo-thermic  
change body temperature to suit the climate.

Ecto-thermic  
releases heat when its hot so it doesn't dehydrate

**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.

By understand the chromosomal nature of inheritance, scientists can understand how inheritance disease pass on from generation to generation, and also give the understand of how ~~the~~ and what other ~~outside~~ outside factors would effect the chromosomal nature of inheritance.