

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

Samples of leaves were taken from various plants. We observed how the plant reacted to heat whilst still attached to the tree. A leaf from a gum tree ~~was~~ and acacia plant was taken, placed in separate beakers and heated in water till it reached boiling point. observations were made concerning colour change and size change to see if water entered or left the leaves.

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

2

The use of heat resistant gloves when handling heated items like the beaker, and the appropriate eye wear used as one observed the leaves in the water.

**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: .....lizard.....

	Kangaroo	lizard
change 1	the would sweat allowing the body to cool, along with licking their paws.	use the sun to allow blood to flow, moving into shade decreases this.
change 2	the body would begin to shiver allowing a blanket of air to surround the internal area to keep warm	Move into the sun allowing blood flow, warming body up allows them to hunt for food and survive.

**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.

...used a grasshopper to see how chromosomal theory was produced. Watched the cycle.

~~...found the QNT to~~

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