

**SUNSHINE SECONDARY SCHOOL MOCK 2019**  
**BIOLOGY PAPER 1**

1. In what **two** ways does excretion differ between plants and animals? **(2marks)**

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2. (a) Give **two** contributions made by Carolus Linneus to classification **(2marks)**

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b) Classify Human being based on the **Order** and **Family** it belongs to? **(2marks)**

Order.....  
Family .....

3. (a) State **two** functions of the plasma membrane? **(2marks)**

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(b) Give the synthesis role of smooth endoplasmic reticulum. **(1mark)**

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4. (a) Distinguish between Plasmolysis and turgidity **(2marks)**

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(b) Explain how the following factors affect active transport **(4marks)**

Oxygen concentration

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Metabolic poisons

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5. How is a palisade cell suited to carry out photosynthesis? **( 3marks)**

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6. (a) What is anaphylaxis **(1mark)**

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(b) State the difference between active artificial acquired and active natural acquired immunity **(2marks)**

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7. State how the following structural features affect transpiration

(3marks)

Leaf fall

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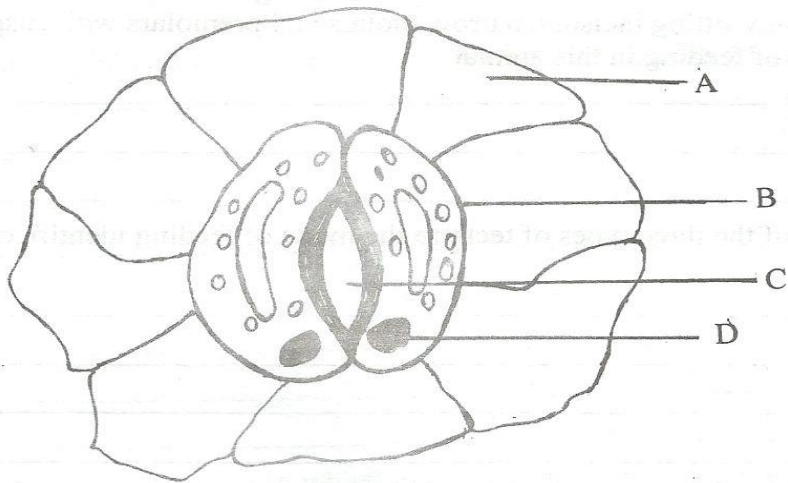
Sunken stomata

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Thin cuticle

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8. The diagram below represents a specialized plant structure



(a) Name the cells labelled A and B

(2marks)

A .....

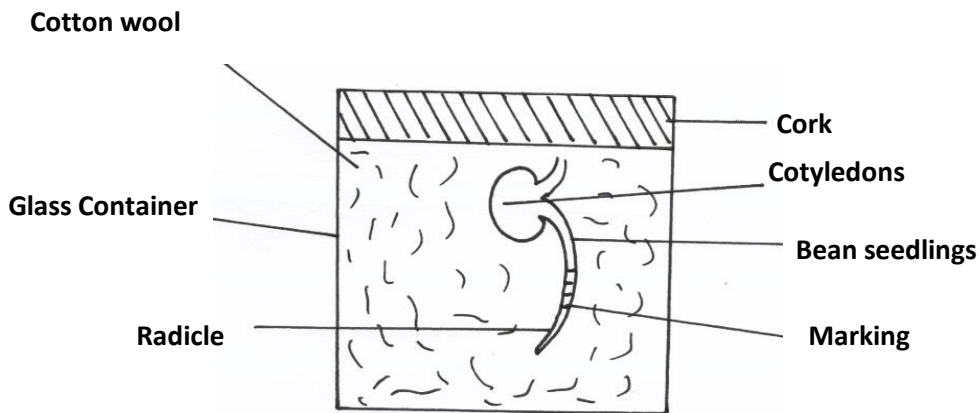
B.....



11. State two differences in the roots of *Monocotyledonae* and *Dicotyledonae*? (2marks)

<i>Monocotyledonae</i>	<i>Dicotyledonae</i>

12. A student set up an experiment as shown in the diagram below.



a) (i) What was being investigated in the experiment? (1mark)

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(ii) Draw a diagram to indicate the expected results of the experiment after three days.

(2mks)

(iii) Why was it necessary to have wet cotton wool in the container (1mark)

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b) What is the role of the following in a germinating seed (2 marks)

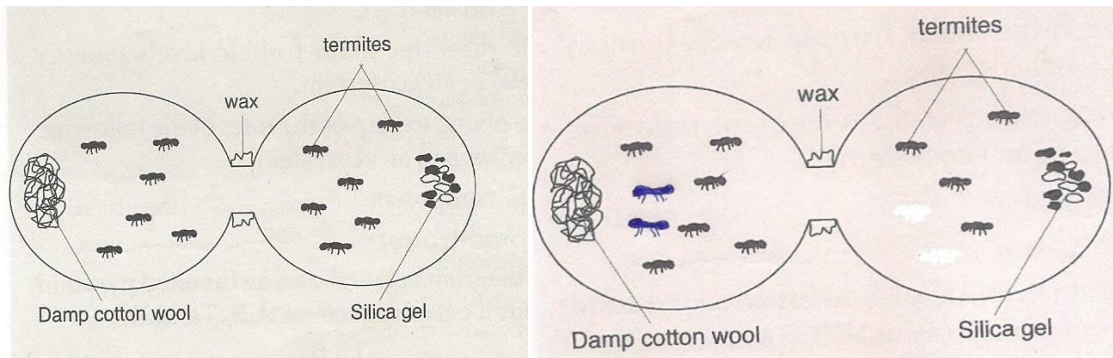
(i) Oxygen

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(ii) Cotyledons

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13. The following set up was used in an experiment



**At the start of experiment**

**at the end of experiment**

(a) State the function of the following in the set –up (3 marks)

i). damp cotton wool

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ii) Silica gel.

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iii) Wax

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b) Deduce the condition that must be present in a termite habitat (2 marks)

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14. (a) Give the importance of nitrogen cycle.

**(1mark)**

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(b)What are the roles of the following organisms in an ecosystem?

**(2 marks)**

Decomposers

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Detrivores

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15. Define the term:

Greenhouse effect

**(1mark)**

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Global warming

**(1mark)**

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16. (a)What is organic evolution? ( 1mark)

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(b) Briefly explain how the peppered moth (*Biston betularia*) shows natural selection

(3 marks)

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c) Distinguish between convergent and divergent evolution

(2 marks)

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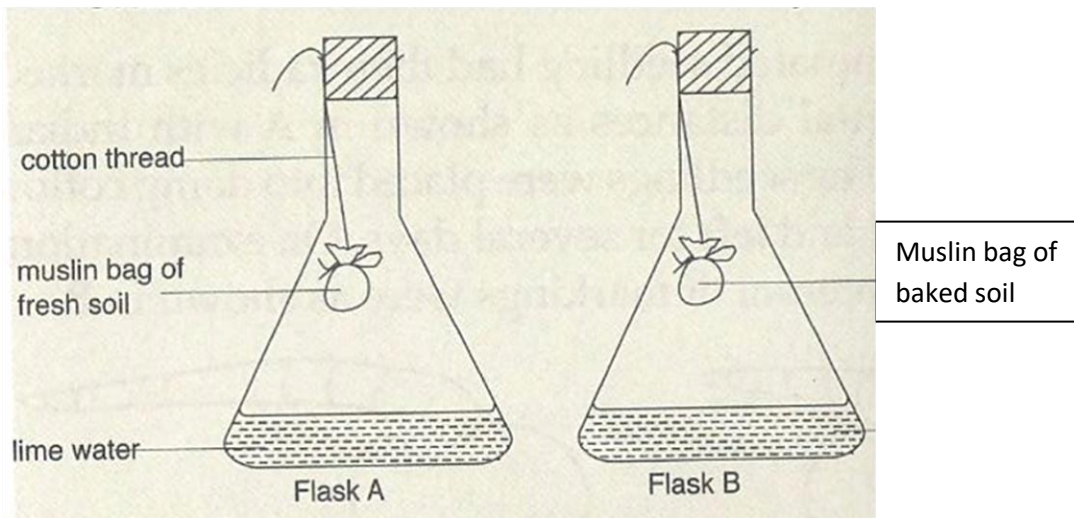
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17. Study the diagram and answer the questions that follow



(a) In which set-up did the lime water become turbid?

(1 mark)

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(b) Explain your answer in (a) above

( 2 marks)

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18. State the **three** structural adaptations of the lungs in mammals ( 3marks)

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19. What are the roles of each of the following on transmission of impulses:( 2 marks)

i) Nodes of Ranvier

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ii) Myelin Sheath

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20. (a) Give **three** effects of over secretion of adrenaline?

( 3 marks)

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21. (a) Define non disjunction?

(1 mark)

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(b) Name **two** genetic disorders of the blood.

**(2marks)**

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22. (a) How are female parts of wind pollinated flowers adapted to perform their function?

**(2marks)**

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23. State how herbaceous plants obtain their support?

**(3marks)**

- (i) .....
- (ii) .....
- (iii) .....