

SUNSHINE SECONDARY SCHOOL MOCK 2015

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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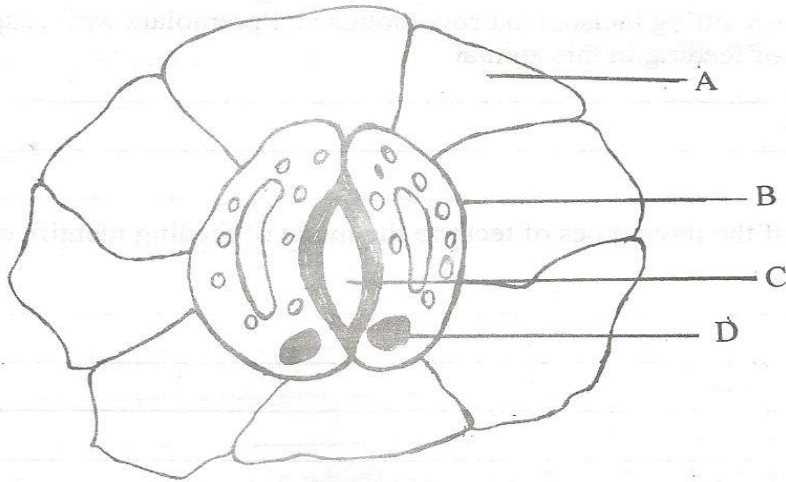
Sunken stomata

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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.....

(b) Describe the mechanism of closing of aperture C (4marks)

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9. Name the causative agent of whooping cough (1mark)

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10. State the economic importance of the following excretory products in plants (2marks)

Nicotine

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Quinine

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11. Give **three** distinguishing features of class Aves (3marks)

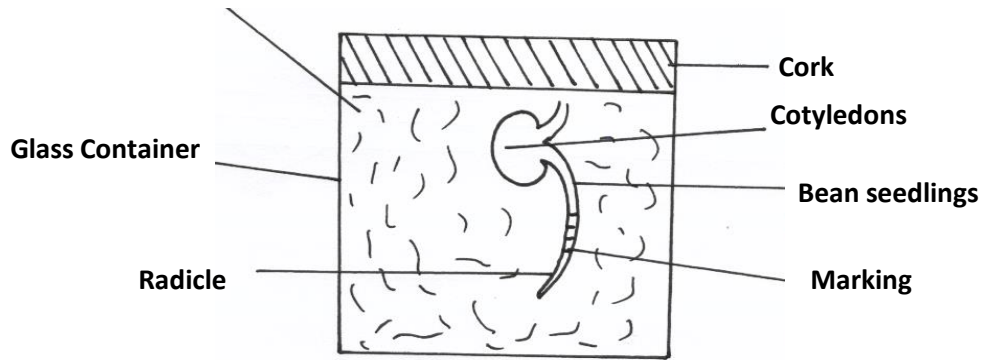
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11. State two differences in the roots of *Monocotyledonae* and *Dicotyledonae*? (2marks)

| <i>Monocotyledonae</i> | <i>Dicotyledonae</i> |
|------------------------|----------------------|
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12. A student set up an experiment as shown in the diagram below.

Cotton wool



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)

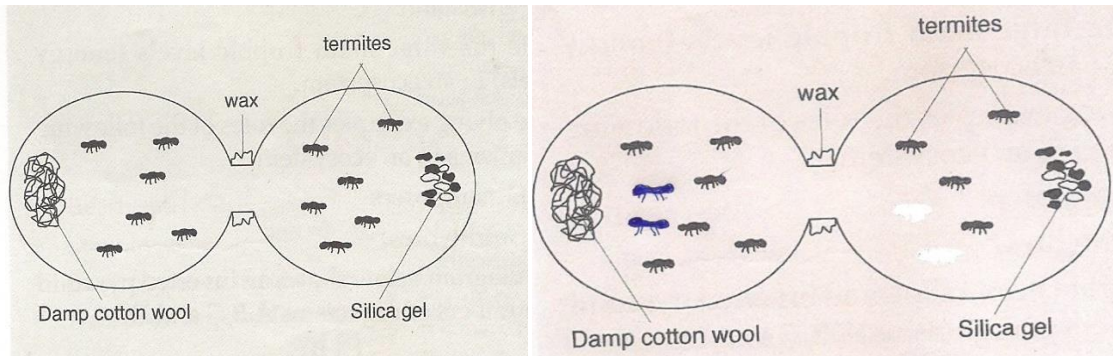
(i) Oxygen

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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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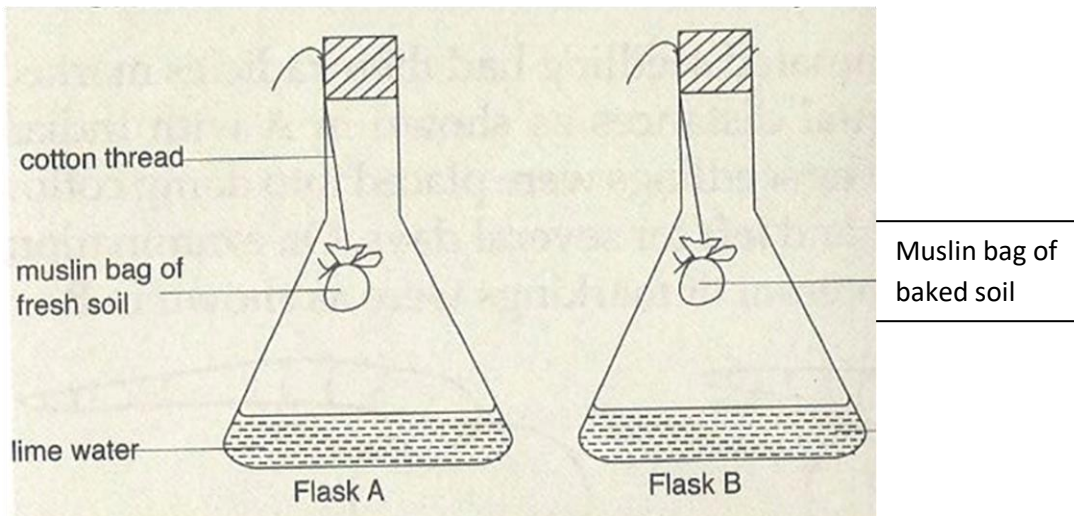
(b)Briefly explain how the peppered moth (*Bistonbetularia*) shows natural selection (3marks)

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c) Distinguish between convergent and divergent evolution **(2 marks)**

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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)