**NAME……………………………………………..…….. ADM NO…………..CLASS…….. ROLL NO……**

**KAHUHO UHURU HIGH SCHOOL**

**BIOLOGY DEPARTMENT**

**FORM III END OF TERM EXAM**

**TERM 3 2014**

**Time 1 Hr.30min.**

***Attempt all the questions in the space provide.***

***QUESTIONS (50 marks)***

1. Suggest the importance of each of the following in living organisms
2. Nutrition. (2mks)

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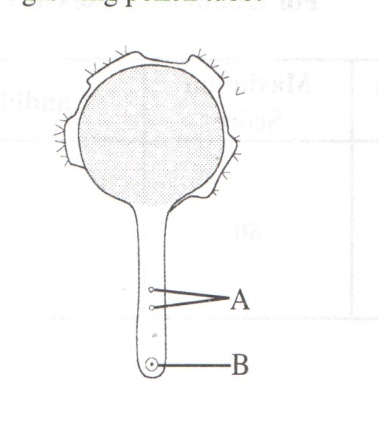
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1. Excretion

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1. The diagram below illustrates a growing pollen tube.



1. Name the part labelled B (1mk)

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1. Explain the role of the parts labelled A (2mks)

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1. A student drew a 6cm long diagram of a plant flower.If the actual lengh of the flower was 12cm, calculate the magnification of the drawing made by the student?Show your working. (2mks)

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1. a) Explain two roles of diffusion in human beings? (4mks)

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b)What is meant by each of the following terms?

i) Crenated cell. (1mk)

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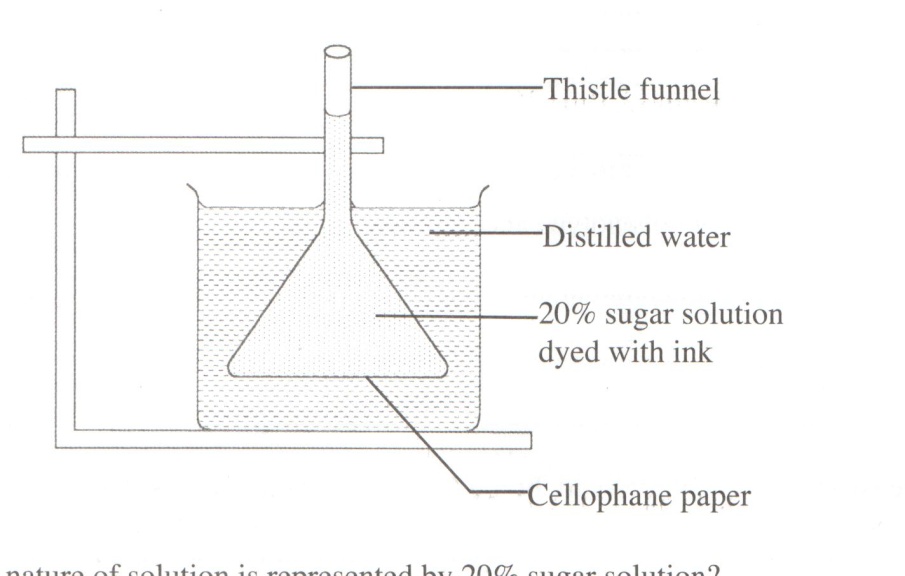
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ii) flaccid cell (1mk)

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1. The diagram below shows a set up for an experiment to demonstrate a certain physiological process



a)what nature of solution is represented by 20% sugar solution? (1mk)

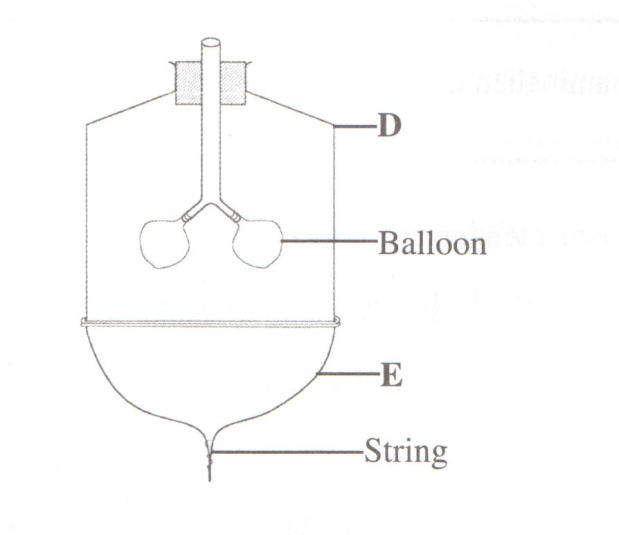
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b) Explain the observation made on the setup after one hour (2mks)

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1. The diagram below represents a model used to demonstrate breathing in mammals



1. Name the mammalian structure represented by the parts labelled D and E
2. D……………………………………………………………………………. (1mk)
3. E……………………………………………………………………………..
4. State the observation made when the string is pulled downwards (1mk)

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1. Explain the observation in (b) above. (2mks)

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1. Explain why
2. Mammalian testes are located to hang outside the body (2mks)

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1. Four months after fertilization, ovaries can be removed from a human female, without terminating pregnancy (2mks)

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1. Why is a burning charcoal stove in a poorly ventilated room likely to cause death of inhabitants (3mks)

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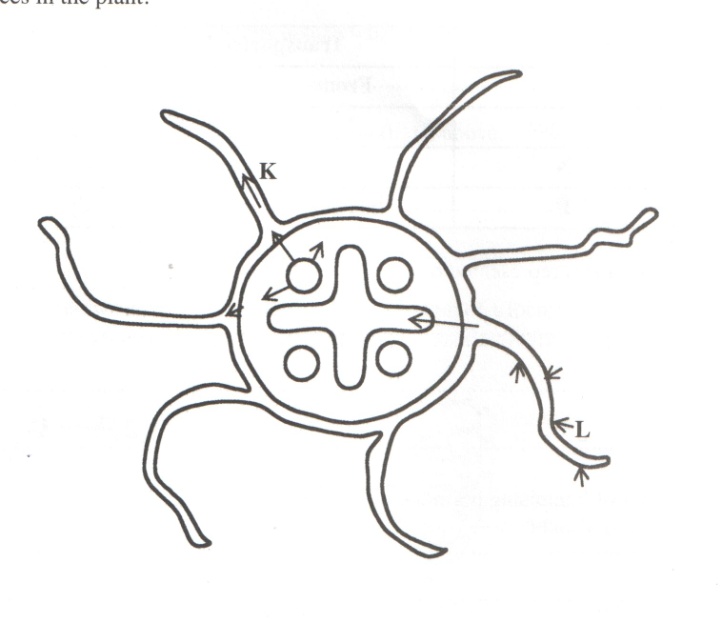
1. State one function of each of the following cell organelles
2. Golgi bodies (1mk)

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1. Lysosomes (1mk)

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1. Below is an illustration of a cross section of a plant root showing the transportation of substances in the plant



1. Name the substances transported along the paths labelled K and L

K…………………………………………………………………………….. (1mk)

L…………………………………………………………………………….. (1mk)

1. Give a reason for your answer in L above (1mk)

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1. The table provided shows the transportation of substances in the human body

|  |  |  |
| --- | --- | --- |
| **Substance** | **Transported by** | |
|  | From | To |
| Oxygen | **M** | Whole body |
| **N** | Liver | Kidneys |
| **P** | Intestines | Whole body |

Name the substances represented by

M …………………………………………………………………………… (1mk)

N …………………………………………………………………………… (1mk)

P …………………………………………………………………………… (1mk)

1. State two role of Luteinising hormone in human reproduction (2mks)

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1. The table provided shows the concentration of sodium and iodine in sea water and cell sap of a plant

|  |  |
| --- | --- |
| Sodium Concentration | Iodide ion Concentration |
| Sea water | 250 | 35 |
| Cell Sap | 100 | 550 |

1. i) Name the process through which the plant cells take up sodium ions (1mk)

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ii)Give a reason for your answer (1mk)

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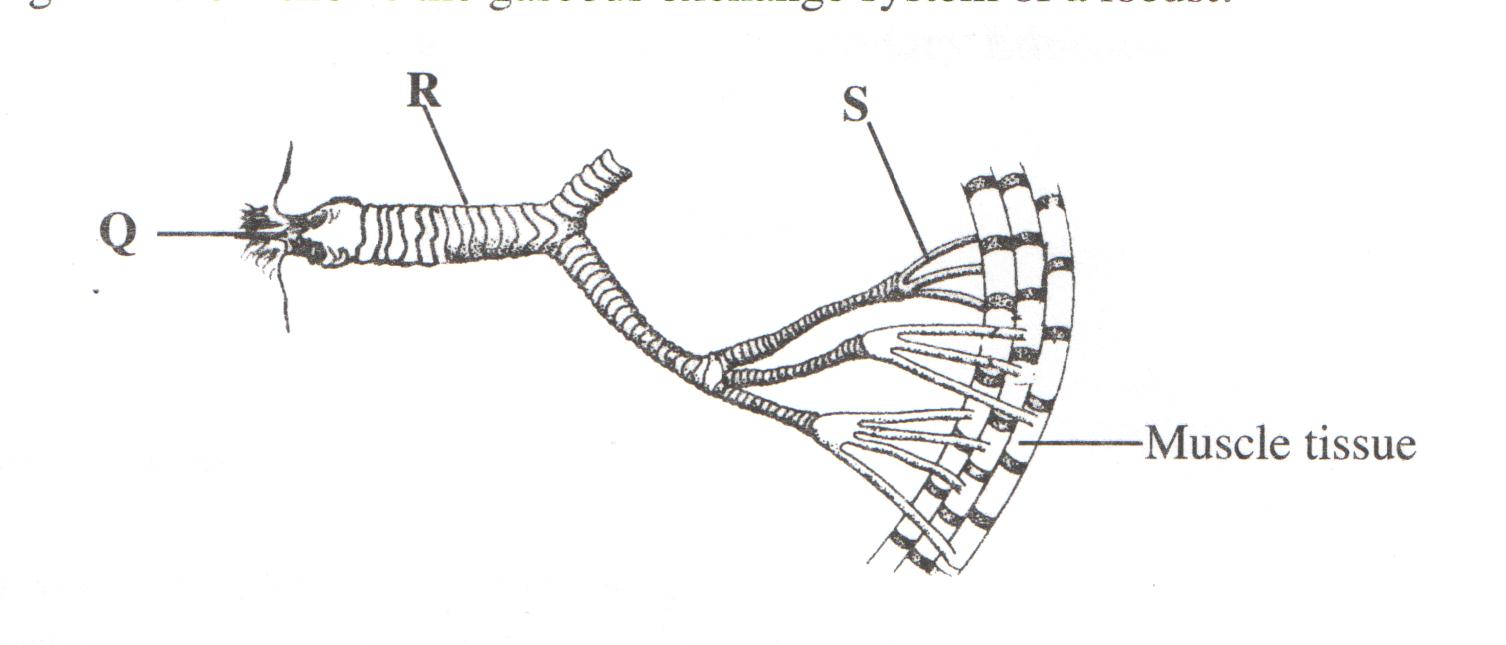
1. If the plant was sprayed with a chemical that inhibits respiration:
2. Which of the two ions uptake will be affected? (1mk)

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1. Give a reason for your answer in (b) (i) above. (1mk)

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1. The diagram below shows the gaseous the gaseous exchange system of a locust



1. Name the structure labelled Q (1mk)

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1. State the function of the part labelled R (1mk)

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1. How is the part labelled S structurally adapted to its function? (2mks)

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1. a) State four characteristics of fruits dispersed by animals (4mks)

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b)Explain the role of calcium ions in blood clotting (1mk)

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Merry Christmass