Name.....Signature.....

KHS

Department of Biology.

S.3 Biology -Holiday Series 2023

(Work for Wednesday 17th May 2023)

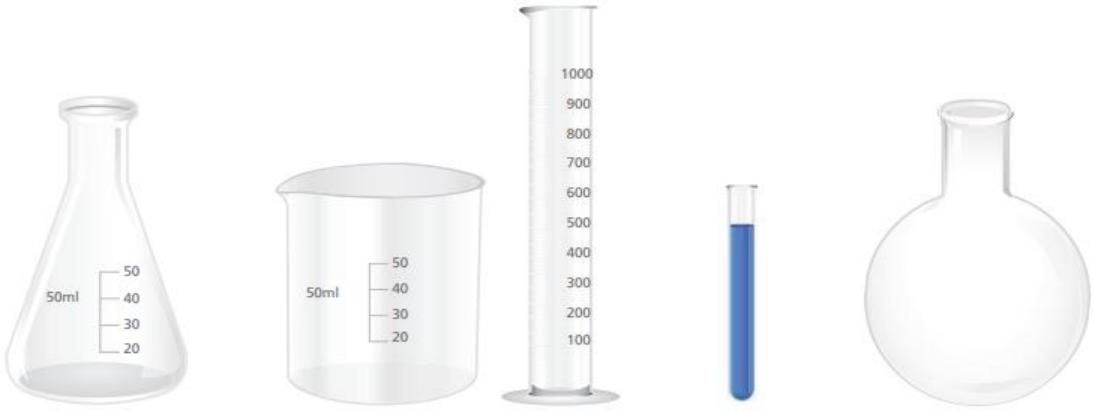
(This work should be written in a book; it should be handed in for marking when the term begins.)

Instructions.

Attempt all questions.

1. A dichotomous key is an important tool used in the study of biology. You are in the holiday and a friend from another school has come to consult you on how to construct a dichotomous key. Using the chemistry apparatus provided in the figure below. Guide them on how to construct a key for such materials given.

(05 marks)



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2. A botanist wrote the following information in his note book. Use it to answer the questions that follow.

Plants collected on 14th May,2023

Plant	Genus	Species
A	Lamium	album
B	Lamium	purpureum

(a) Write the scientific name of each organism collected by the zoologist.

(02 marks)

A.....

B.....

(b) The botanist cross-pollinated these two plants. State and explain whether the pollination was successful or not.

(02 marks)

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(c) State one importance of binomial nomenclature *(01 mark)*

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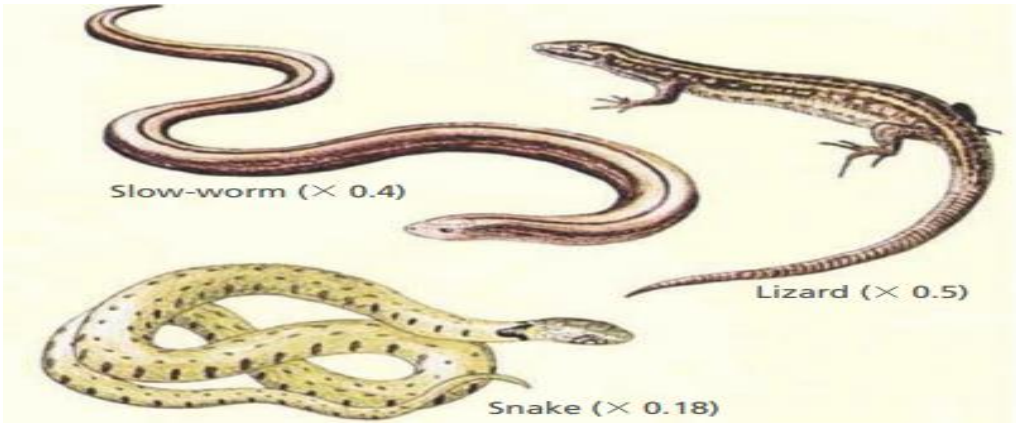
3. In a certain health centre in Zombo, the chart below was seen hanged in the reception of the Out-Patient Department room. Study it and answer the questions that follow.

SNAKE BITES ARE DANGEROUS TO YOUR HEALTH

PLEASE REPORT ANY CASE OF SNAKE OR LIZARD BITING



(a) Identify the class to which these organisms on the chart belong. ***(01 mark)***

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(b) Explain why you should report any case of biting by the above organisms.

(02 marks)

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(c) Briefly explain how you can prevent snake bites around your home.

(02 marks)

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4. The table below shows the variation in number of red and white blood cells in madam Namukwaya's blood for the last eight days.

Day	1	2	3	4	5	6	7	8
No. of red blood cells(millions)	5	5	5.2	5.2	5.2	5.2	5.2	5
No. of white blood cells(millions)	7	7	7.5	8	9	8	7.5	7

(a) Suggest an explanation regarding the health of madam Namukwaya from day 3 to day 6. ***(02 marks)***

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(b) State why the number of red blood cells in madam Namukwaya's blood almost remained constant for all the eight days. ***(02 marks)***

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(c) From the table, explain the biological significance of possessing a higher number of white blood cells. ***(01 mark)***

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5. In some plants the stomata close for a period at about mid-day. Suggest some possible advantages and disadvantages of this to the plant. ***(05 marks)***

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6. (a) State three ways in which pepsin shows the characteristics of an enzyme. ***(03 marks)***

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(b) In experiments with enzymes, the control is often involving the boiled enzyme. Suggest why this type of control is used. ***(02 marks)***

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END

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