THE UNITED REPUBLIC OF TANZANIA
NATIONAL EXAMINATIONS COUNCIL
CERTIFICATE OF SECONDARY EDUCATION EXAMINATION

033/2A
BIOLOGY 2A
ALTERNATIVE A PRACTICAL
(For Both School and Private Candidates)

TIME: 2:30 Hours
Wednesday 7th, October 2009 a.m.

Instructions

1. This paper consists of two (2) questions.
2. Answer all questions.
3. Each question carries 25 marks.
4. Except for diagrams which must be drawn in pencil all writing should be in blue/black/ball point pen.
5. Electronic calculators are not allowed in the examination room.
6. Cellular phones are not allowed in the examination room.
7. Write your Examination Number on every page of your answer booklet(s).

This paper consists of 2 printed pages.
1. (a) You are provided with solution $S_1$. Carry out experiments to identify the food substances present in it. Record your procedure, observation and inferences as shown in the table below.

<table>
<thead>
<tr>
<th>Test for</th>
<th>Procedure</th>
<th>Observation</th>
<th>Inference</th>
</tr>
</thead>
</table>

(b) (i) Name the food substances you have identified.
(ii) State two (2) sources of each food substance named in 1(b) (i) above.
(iii) Mention one (1) role of each food substance you have identified.

(c) In which parts of the digestive system are the above mentioned food substances digested? In each case mention the enzyme and the products.

2. (a) Using a hand lens examine specimen $A_1$.
(i) Identify specimen $A_1$ by its common name.
(ii) Name the phylum and class to which specimen $A_1$ belongs.
(iii) Give an example of another organism which belongs to the same phylum as specimen $A_1$.

(b) Draw a well labelled diagram of specimen $A_1$.
(c) How is specimen $A_1$ adapted to its mode of nutrition?
(d) What is the economic importance of specimen $A_1$?
(e) Where can specimen $A_1$ be found?

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