

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

**133/3A**

**BIOLOGY 3A  
(ACTUAL PRACTICAL A)  
(For Both School and Private Candidates)**

**Time: 3:20 Hours**

**Thursday, 09<sup>th</sup> May 2019 a.m.**

**Instructions**

1. This paper consists of **three (3)** questions.
2. Answer **all** the questions.
3. Question **one (1)** carries **20** marks and the other **two (2)**, 15 marks each.
4. All answers must be written in the answer booklet(s) provided.
5. Except for diagrams which must be drawn in pencil, all writing should be in blue or black ink.
6. Calculators, cellular phones and any unauthorized materials are **not** allowed in the examination room.
7. Write your **Examination Number** on every page of your answer booklet(s).



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1. You have been provided with specimen  $S_1$ . Dissect specimen  $S_1$  in a usual way and display the digestive system on the right side of the animal.

**Leave your dissection properly displayed for assessment.**

- (a) Draw a large, neat, well labeled diagram of your dissection.
- (b) State one role played by each part which makes up the following:
- (i) fore gut
  - (ii) mid gut.

2. You have been provided with solutions  $S_2$  and  $S_3$ .

- (a) Identify the food substances present in each of the solutions  $S_2$  and  $S_3$  by using the chemicals and reagents provided only. Tabulate your work as shown in following table.

| Food Tested | Procedure | Observation | Inference |
|-------------|-----------|-------------|-----------|
|             |           |             |           |

- (b) Which of an excess food substance identified in 2(a) is eliminated from the body?
- (c) Briefly explain the process responsible for the conversion of the food substance you named in 2(b) to a form that can be eliminated from the body.

3. You have been provided with specimens  $D_1$ ,  $D_2$  and  $D_3$ .

- (a) Identify specimens  $D_1$ ,  $D_2$  and  $D_3$  by their common names.
- (b) State two adaptations shown by each of the specimens  $D_1$  and  $D_2$  to its habitat.
- (c) Classify each of the specimens  $D_1$ ,  $D_2$  and  $D_3$  to Class level.
- (d) Study specimens  $D_2$  and  $D_3$  carefully then state why these specimens are said to belong to the same Kingdom but in different Class? Give two points in each.