THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATIONS COUNCIL OF TANZANIA

CERTIFICATE OF SECONDARY EDUCATION EXAMINATION

033/2B **BIOLOGY 2B**

(ACTUAL PRACTICAL B)

(For Both School and Private candidates)

Time: 2:30 Hours **Year: 2020**

Instructions

1. This paper consists of **two (2)** questions**.**
2. Answer **all** questions**.**
3. Each question carries twenty **five (25)** marks**.**
4. All writing must be in **blue** or **black** ink **except** drawing which must be in pencil.
5. Cellular phones, and any unauthorized materials are **not** allowed in the examination room.
6. Write your **Examination Number** on every page of your answer booklet (s)

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1. You are provided with a piece of mirror and food samples labelled by letter **A**, **B, C** and **D**. Carry out experiments under procedures (i) – (v) and then answer the questions that follow:

   (i) Hold up a mirror in front of your face while opening your mouth widely, and note all sense organs reflected on the mirror.

   (ii) Carefully look at specimens **C** and **D** and note their coarseness.

   (iii) Touch both sample **C** and **D** and note their coarseness.

   (iv) Hold specimen **D** near the right ear, then shake it vigorously and note the sound that comes from inside.

   (v) Observe the food samples **A, B,** and **C** carefully. Do not taste the food sample in the laboratory.

   Questions

   (a) Identify the function of each sense organ identified in procedure (i).

   (b) Name the stimuli perceived by each of the sense organs identified in procedure (i).

   (c) What is the shape of the samples **C** and **D**?

   (d) Identify the coarseness of samples **C** and **D**.

   (e) Identify the contents producing the sound inside sample **D**.

   (f) Draw a well labeled diagram of sense organ observed in the mouth and locate the regions corresponding to the taste of the following food samples: (i) **A** (ii) **B** (iii) **C**.

   (g) Briefly explain how the nervous system recognizes the taste of food samples.

2. You are provided with specimens **Q, R, S** and **T** and answer the questions that follow:

   (a) Classify the specimens **Q, R** and **S** from Phylum/Division to Class level.

   (b) What distinctive features of the specimen R makes it typical representative of

the Class it belongs?

(c) What are the three observable differences between the specimens **Q** and **R** at Class level?

(d) (i) What is the habitat of each of the specimens **S** and **T**?

(ii) Identify three observable features which help the specimen **T** to adapt its habitat.

(e) Give three advantages of the products produced by each specimens **S** and **T** for the development of processing industry in Tanzania.