**THE UNITED REPUBLIC OF TANZANIA**
**NATIONAL EXAMINATIONS COUNCIL OF TANZANIA**
**DIPLOMA IN SECONDARY EDUCATTION EXAMINATION**

**733/2A** **BIOLOGY 2**

**(PRACTICAL 2A)**

**Time: 3 Hours** **Year: 2024**

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**Instructions.**

1. This paper consists of sections **three** questions.
2. Answer **all** questions.
3. Cellular phones are **note** allowed in the examination room.
4. Write your **examination Number** on every page of your answer booklet(s).

1. Dissect the provided specimen T in the usual way and display the digestive and reproductive system. Then, respond to the following questions: -

   (a) Draw a well labelled diagram of the dissected specimen T to show six parts that form the digestive system and two parts that form the reproductive system.

   (b) Study the digestive system of specimen T carefully and name three major parts that form the alimentary canal.

2. Provided with specimen $E_1$ and $E_2$ and required to carry out an experiment using the following procedures:
   (i) Cut the specimen E1 into two halves using scalpel/sharp knife.
   (ii) Put 2 drops of iodine solution on the surface of one half and leave it for five minutes then observe the colour changes
   (iii) Put two drop of Benedicts' solution on the surface of another half. Leave it for five minutes then observe the colour change.
   (iv) Remove the outer cover from the specimen $E_1$.
   (v) Rub the opened specimen $E_2$ on a plain paper provided for some times then dry using an open flame and observe the changes.

   **Questions**

   (a) (i) What was the colour change after adding 2 drops of iodine solution on the surface of specimen $E_1$?

   (b) (ii) Identify the food substances contained in specimen $E_1$.

   (c) (iii) State the basis for the test which lead to the colour change.

   (d) Identify the enzymes which are responsible for digestion of the food substances identified from specimen $E_1$ and state its end product of digestion.

   (e) What is the role of the food substance identified in part (a) (ii) in plant body? Give four points.

   (f) State two functions of the food substance contained in $E_2$ to animal living in semiarid region.

3. You are provided with specimens A, B and C and specimen D then carefully observe each specimen and answer the following questions:

   (a) State five observable features which differentiate specimen A and D

   (b) What are the three common observable features which are found in specimen B and C?

   (c) Draw a diagram of specimen B and label five parts