

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

033/2C

**BIOLOGY 2C
(ACTUAL PRACTICAL C)
(For Both School and Private Candidates)**

Time: 2:30 Hours

Tuesday, 15th November 2016 a.m.

Instructions

1. This paper consists of two (2) questions. Answer all questions.
2. Each question carries 25 marks.
3. Except for diagrams which must be drawn in pencil, all writings should be in blue or black ink.
4. Calculators and cellular phones are not allowed in the examination room.
5. Write your Examination Number on every page of your answer booklet(s).

1. (a) You are provided with specimen **J**.
 - (i) Prepare a solution from specimen **J** and label it as solution **S₁**.
 - (ii) Outline procedures you used to prepare the solution **S₁**.
 - (iii) Carry out experiments to identify the carbohydrates present in the solution. Record your experimental work as shown in Table 1.

Table 1

Food Tested	Procedure	Observation	Inference

- (b) For each food substances identified in 1 (a) (iii), name:
 - (i) The sites of digestion.
 - (ii) glands present in each site of digestion named in (b) (i).
 - (iii) secretions produced by each of the glands named in (b) (ii).
 - (iv) enzyme contained in each of the secretions named in (b) (iii).
 - (c) State three natural source of each food substance identified in solution **S₁**.
2. You are provided with specimens **A, B, C, D** and **E**.
 - (a)
 - (i) State the common name for each specimen.
 - (ii) Classify each specimen **B, C** and **E** to the Class level.
 - (iii) State two observable features which have enabled you to place specimens **B, C** and **E** in their respective Classes.
 - (b)
 - (i) State the habitat of specimen **C**.
 - (ii) Explain two adaptations shown by specimen **C** to its environment.
 - (c) Name the lowest classification rank under which specimen **A** and **D** can be grouped together.
 - (d) Using examples, explain two advantages of the Kingdom in which specimen **E** belongs.