

CONFIDENTIAL

**THE UNITED REPUBLIC OF TANZANIA
NATIONAL EXAMINATIONS COUNCIL OF TANZANIA
CERTIFICATE OF SECONDARY EDUCATION EXAMINATION
NOVEMBER 2019**

033/2A

**BIOLOGY 2A
(ACTUAL PRACTICAL A)**

24 HOURS ADVANCE INSTRUCTIONS

1.0 IMPORTANT

- 1.1 GREAT CARE MUST BE TAKEN NOT TO DIVULGE THESE INSTRUCTIONS TO BOTH CANDIDATES AND UNAUTHORIZED PERSONS EITHER DIRECTLY OR INDIRECTLY.
- 1.2 MAKE SURE THAT THE CANDIDATES ARE PROVIDED WITH THE SPECIMENS, CHEMICALS AND APPARATUS INDICATED IN THESE ADVANCE INSTRUCTIONS ONLY AND NOT OTHERWISE.

2.0 PREPARATION OF APPARATUSES

Prepare a set of four test tubes for each candidate and use stickers to label them as 1, 2, 3 and 4 respectively. Provide a set of 4 test tube to each candidate.

3.0 LABELLING OF SPECIMENS

- | | |
|--|---|
| (a) Grasshopper (1 per candidate) ----- | A |
| (b) Tilapia (1 per candidate) ----- | B |
| (c) Maize seedling (1 per candidate) ----- | C |
| (d) Bean seedling (1 per candidate) ----- | D |
| (e) Castor seed (5 per candidate) ----- | M |

4.0 LABELLING OF CHEMICALS

Prepare *fresh* solutions, label them as shown below and provide in such a way that can be shared by 2 - 4 candidates.

- (a) Benedict's solution
- (b) Sodium hydroxide solution
- (c) Iodine solution
- (d) Sudan III solution
- (e) Tap/rain/distilled water
- (f) Copper Sulphate solution

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5.0 APPARATUSES

Provide candidates with

- | | |
|---|------------------|
| (a) Watch glasses..... | 4 per candidate |
| (b) Sieve..... | 1 per candidate |
| (c) Scalpel/ knife..... | 1 per candidate |
| (d) Mortar and pestle..... | 1 per candidate |
| (e) Test tubes..... | 4 per candidate |
| (f) Beakers..... | 1 per candidate |
| (g) Pipette/dropper with measurement..... | 1 per candidate |
| (h) Test tube rack..... | 1 per candidate. |

6.0 OTHER REQUIREMENTS

- | | |
|--------------------|----------------------------------|
| (a) Stickers | 4 per candidate |
| (b) Clock | 1 may be shared by 10 candidates |

7.0 NOTE TO EXAMINATIONS SUPERVISOR AND HEAD OF BIOLOGY DEPARTMENT

The Head of Biology Department/ Biology Teacher must fill in the attached declaration form in page 3 to indicate the quantity provided, and the labels used for specimens, chemicals and apparatuses as indicated in the 24 Hours Instructions. The form must be filled at the beginning of each session of the examination and submitted to the council enclosed together with the candidates' scripts in the last envelope of the final session.