

CONFIDENTIAL

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

033/2B

**BIOLOGY 2B
(ACTUAL PRACTICAL B)**

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 SPECIMEN, CHEMICALS AND APPARATUSES INDICATED IN THESE ADVANCE INSTRUCTIONS ONLY AND NOT OTHERWISE.

2.0 PREPARATION OF APPARATUSES

For each candidate, prepare a set of four test tubes and use stickers to label them as 1, 2, 3 and 4. Provide the set to each candidate.

3.0 LABELLING OF SPECIMEN

- | | | |
|-----|-------------------------------------|---|
| (a) | Irish potato (1 per candidate)..... | P |
| (b) | Spider (1 per candidate)..... | W |
| (c) | Lizard (1 per candidate)..... | X |
| (d) | Earthworm (1 per candidate)..... | Y |
| (e) | Ascaris (1 per candidate)..... | Z |

4.0 LABELLING OF CHEMICALS

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

- | | |
|-----|---------------------------|
| (a) | Benedict's solution |
| (b) | Copper sulphate solution |
| (c) | Sodium hydroxide solution |
| (d) | Iodine solution |
| (e) | Dilute hydrochloric acid. |
| (f) | Tape/rain/distilled water |

CONFIDENTIAL**5.0 APPARATUSES**

Provide candidates with

(a) Watch glasses.....	5 per candidate
(b) Scalpel/ knife.....	1 per candidate
(c) Mortar and pestle.....	1 per candidate
(d) Test tubes.....	4 per candidate
(e) Beakers.....	2 per candidate
(f) Pipette/dropper with measurement.....	1 per candidate
(g) Test tube rack.....	1 per candidate
(h) Test tube brush.....	1 per candidate
(i) Test tube holder	1 per candidate
(j) Sieve.....	1 per candidate
(k) Source of heat	1 per candidate

6.0 OTHER REQUIREMENTS

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

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.