

CONFIDENTIAL
THE UNITED REPUBLIC OF TANZANIA
NATIONAL EXAMINATIONS COUNCIL OF TANZANIA
ADVANCED CERTIFICATE OF SECONDARY EDUCATION
EXAMINATION 2023

131/3A

PHYSICS 3A
(PRACTICAL A)

03 HOURS PRACTICAL ADVANCE INSTRUCTIONS

1.0 IMPORTANT

- 1.1 GREAT CARE MUST BE TAKEN **NOT** TO DIVULGE THIS INFORMATION TO BOTH CANDIDATES AND UNAUTHORIZED PERSONS EITHER DIRECTLY OR INDIRECTLY.
- 1.2 MAKE SURE THAT THE CANDIDATES ARE PROVIDED WITH THE APPARATUSES INDICATED IN THESE PRACTICAL INSTRUCTIONS ONLY AND **NOT** OTHERWISE.

2.0 PREPARATION OF APPARATUSES

In addition to the normal fitting of a Physics laboratory, each candidate will require the following:

- 2.1 Aluminium wire of thickness 2 mm bent into a circular loop of diameter 20 cm
A stopwatch/clock
A metre rule
A pendulum bob
A cotton thread of 120 cm long
A retort stand with its accessories
A pair of cork pads.
- 2.2 150 ml of hot water at 90 °C labelled **B**
A beam balance (to be shared)
A stopwatch/clock
A thermometer (0 °C – 100 °C)
A calorimeter (100 ml) with its lid and stirrer
A source of heat.

- 2.3 Two dry cells (ABC Supper Electric, size D, each 1.5 V) connected in series and soldered both ends labelled **E**
A key/switch, labelled **K**
An ammeter (0 - 1) A labelled **A**
Voltmeter (0 - 3) V labelled **V**
A resistance box of range 0 Ω to 100 Ω labelled **S**
Unknown resistor (2 Ω) should be covered and labelled **R**
10 pieces of connecting wires.