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 $^{\circ}$C labelled **B**
A beam balance (to be shared)
A stopwatch/clock
A thermometer (0 $^{\circ}$C – 100 $^{\circ}$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.