

CONFIDENTIAL
THE UNITED REPUBLIC OF TANZANIA
NATIONAL EXAMINATIONS COUNCIL OF TANZANIA
ADVANCED CERTIFICATE OF SECONDARY EDUCATION
EXAMINATION 2024

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 A stopwatch/clock
Retort stand with its accessories
Cotton thread of length 110 cm
Metre rule
Two cork pads
Pendulum bob.
- 2.2 Thermometer (0 – 100°C)
Copper calorimeter (100 ml) and its stirrer
Liquid A (olive oil, 80 ml)
Liquid B (water, 80 ml)
Beaker of 250 ml
Lid with a hole at the centre for the thermometer to be inserted
A stopwatch/clock
Source of heat.
- 2.3 2 dry cells (ABC Supper Electric, size D, each of 1.5 V) connected in series and soldered both ends labelled E

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Standard resistor, **R** of $4\ \Omega$

Galvanometer, **G**

Metre rule

Jockey

A metre bridge

A key, **K**

Nichrome wire (SWG 28) of length 100 cm labeled **W**

Pieces of connecting wires.