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 ($0 - 100^{\circ}C$)
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**

Standard resistor, **R** of 4 Ω
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.