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

031/2A

PHYSICS 2A
ACTUAL PRACTICAL A

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 PLEASE DO NOT OPEN THE ENVELOPE CONTAINING THE QUESTION PAPERS 24 HOURS BEFORE THE TIME OF COMMENCEMENT OF THE EXAMINATION.

2.0 In addition to the normal fittings of a Physics laboratory each candidate will require the following:

2.1 Retort stand with its accessories
   - Spiral spring (which can be extended by 18 - 20 cm by a load of 100 g)
   - Metre rule
   - Five standard masses 50 g, 100 g, 150 g, 200 g, 250 g
   - 2 optical pins
   - Plasticine
   - Beam balance to be shared
   - Liquid (water, 100 ml) labelled L
   - Empty bottle of drinking water (500 ml) cut to a height of about 6 cm with two holes across its diameter labelled Q
   - Thread of about 10 cm.

2.2 A dry cell (ABC Supper Electric, size D, 1.5 V) labelled E
   - Resistance box, (0 - 10) Ω labelled R
   - Key, labelled K
   - Centre-zero galvanometer, labelled G
   - A resistor of about 3.3 Ω should be covered and labelled X
   - A set of connecting wires and Jockey labelled J
   - Metre bridge
   - Metre rule
   - 5 Ω standard resistor.